

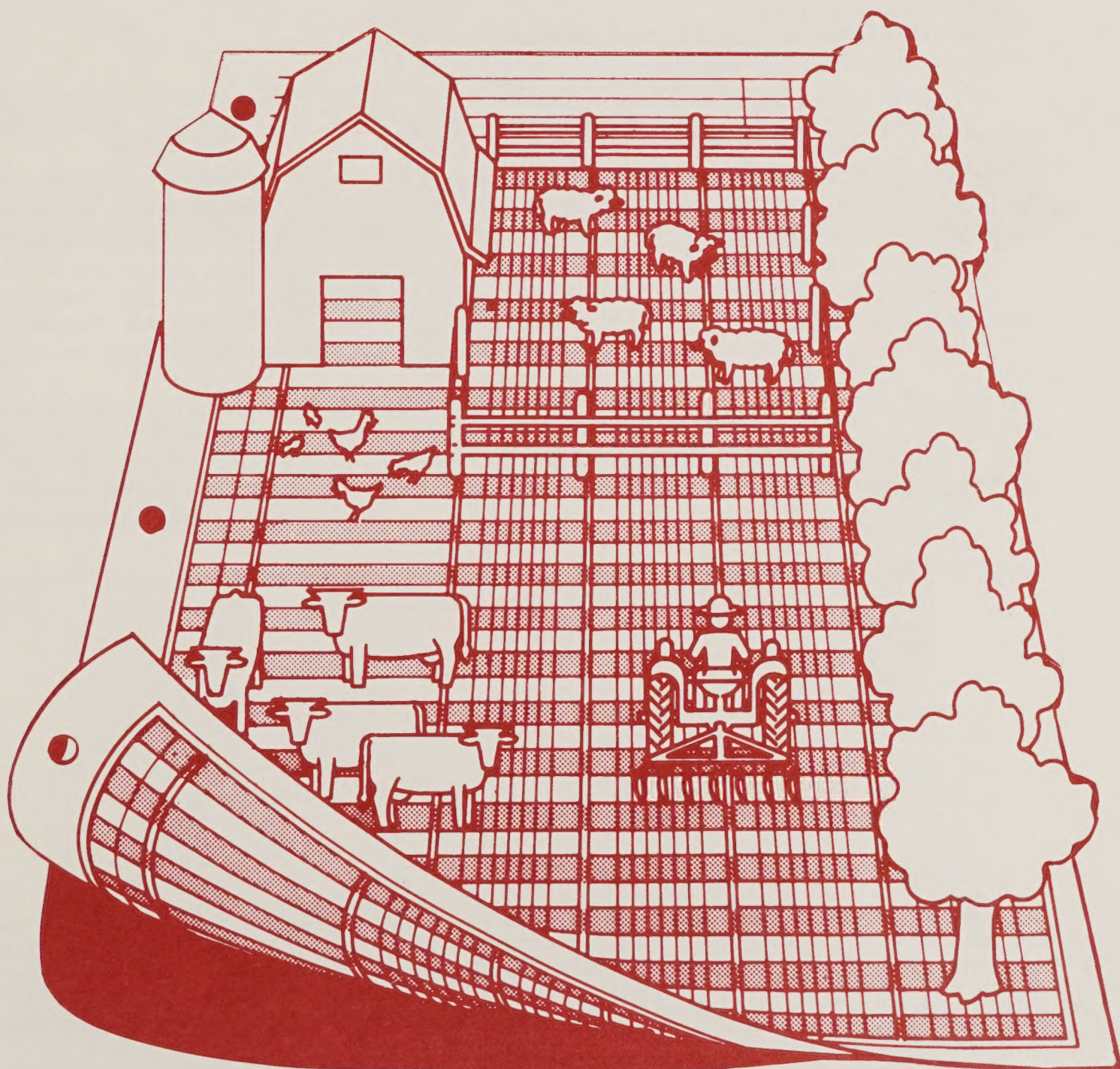
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Economic Indicators of the Farm Sector

Costs of Production-- Major Field Crops & Livestock and Dairy, 1991



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Abstract

Average U.S. economic costs of producing corn, oats, wheat, milk, and cow-calf declined in 1991, while sorghum, barley, soybean, and rice production costs were higher than in 1990. Prices paid for most major input items showed slight gains. Seed and energy costs, however, remained relatively stable. Variable cash expenses were largely unchanged for corn and wheat, while declining for milk, cow-calf, and oats. Changes in variable cash expenses ranged from a 3-percent decline per breeding cow in cow-calf operations to a 5-percent per acre increase for grain sorghum.

Keywords: Costs of production, enterprise costs and returns.

Preface

This report is one of four in the annual *Economic Indicators of the Farm Sector* series. Others are: *National Financial Summary*, *State Financial Summary*, and *Production and Efficiency Statistics*.

This year's *Costs of Production* contains information for both crop and livestock enterprises, combining estimates previously reported in two separate publications. (*Economic Indicators of the Farm Sector: Costs of Production--Major Field Crops & Livestock and Dairy*). New production practice and expenditure data from the cotton, peanut, and corn versions of the 1991 Farm Costs and Returns Survey (FCRS) were incorporated into 1991 estimates. Because wheat production regions were redefined in 1989 to accommodate the distribution of the new survey data, costs for years prior to 1989 for the old production regions are located in appendix tables 1A-9A.

Cost-of-production estimates for sugar beets and sugarcane (which are published in the September and March issues of *Sugar and Sweetener Situation and Outlook Report*), hog farrow-to-finish, feeder pig production, and feeder pig finishing enterprises (which are reported in *Costs and Structure of U.S. Hog Production*) and fed cattle (which are reported in *Livestock and Poultry Situation and Outlook Report*), are not reprinted in this publication.

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Highlights

Average U.S. economic costs of producing corn, oats, wheat, milk, and cow-calf declined in 1991, while sorghum, barley, soybean, and rice production costs were higher than in 1990. Prices paid for most major input items showed slight gains over 1990. Seed and energy costs, however, remained relatively stable. Variable cash expenses were largely unchanged for corn and wheat, while declining for milk and oats. Estimates for 1990 through 1991 for cow-calf, and for 1989 through 1991 for milk production, were revised to make the methodology consistent with that used for field crops.

CORN. U.S. total economic cost per planted acre of corn in 1991, at \$292.55, was nearly the same as in 1990, but regional costs varied. Reduced corn yields in 1991 for North Central and Northeast growers resulted in lower costs for harvesting and drying. Conversely, corn production costs were higher for Plains and Southeast producers because of improved yields.

SORGHUM. Although the per-bushel price of sorghum rose by 13 percent in the Central Plains, per-acre yields fell by slightly more than 13 percent. In the Southern Plains, the per-bushel price of sorghum rose by only 3 percent, but per-acre yields rose almost 17 percent. Variable cash expenses rose by 3 percent in the Central Plains and by 7 percent in the Southern Plains while fixed cash expenses fell by 10 percent in both regions and for the country as a whole. At the U.S. level, the per-bushel price of sorghum rose by almost 10 percent while per-acre yields fell by 3 percent.

OATS. Although the per-bushel harvest month price of oats rose by 12 percent during 1990-91, per-acre yields fell by 18 percent at the U.S. level. The Northeast Region had the largest price increase, 25 percent, and the largest drop in per-acre yields, 32 percent. In the North Central Region, the price per bushel rose by 10 percent while per-acre yields fell by 27 percent. In the Northern Plains, per-acre yields were almost unchanged while the per-bushel price rose by 11 percent.

BARLEY. U.S. average production costs for States included in the barley costs-of-production program increased slightly. While U.S. yields improved, the price of barley fell, resulting in an 11-percent decline in returns to risk and management. The 1991 price, \$2.07 per bushel, received at harvest month covered only about two-thirds of the longrun costs of producing a bushel of barley.

WHEAT. Although the total economic costs of producing wheat declined on average in the United States, residual returns to management and risk fell because the average harvest-month price decreased 8 percent and the average yield dropped 17 percent. Harvest-month price changes ranged from +5 percent in the Pacific Region to -20 percent in the Southeast Region, while yields decreased from 8 percent in the Northern Plains to 39 percent in the Pacific Region.

SOYBEAN. The U.S. total economic cost per planted acre of soybeans was \$194.92, about 2 percent higher than in 1990. Among producing regions, economic costs increased by more than 7 percent for Southeast and Delta growers. Higher costs for southern producers were the result of improved yields, and thus greater harvesting costs, and higher herbicide prices.

RICE. Total economic costs of producing rice, including the costs of farm program participation, increased by 4 percent. An increase in variable cash expenses of more than 4 percent outweighed a larger percentage decrease in fixed cash expenses. Higher market prices in 1991 improved net return estimates from rice production in all regions. Even with the addition of government payments, however, total returns exceeded total production costs by \$8.46 per acre at the U.S. level.

PEANUTS. Drought caused low seed germination, resulting in premium prices for quality, high germination seed peanuts. At the U.S. level, a 26-percent increase in per-acre yields partially offset the 54-percent increase in per-acre seed costs. Per-acre seed costs rose 90 percent in the Southern Plains but per-acre yields rose only 4 percent. The most modest increases were in the Virginia-North Carolina region where per-acre yields rose by 3.5 percent and seed costs rose by 23 percent. The largest increase in per-acre yields, 45 percent, was in the Southeast Region.

COTTON. Although the average U.S. cotton price and yield declined, cash expenses were lower. Cotton producers had relatively the same level of variable cash expenses, while lower interest expenses resulted in an overall reduction of fixed cash expenses.

MILK. The average return to management and risk per cow for U.S. milk production returned to 1988 levels after two consecutive years of relatively high milk prices and strong returns in 1989 and 1990. Average variable cash expenses per cow were \$1,346, and total cash expenses per cow were \$1,601. Both were 2 percent below 1990 values. However, the small decline in average costs was more than offset by the 10-percent decline in the average all-milk price. In contrast to the U.S. average, costs of producing milk were higher for the Northeast, Appalachian, and Southern Plains regions.

COW-CALF. Gross value of production rose by 4 percent. In the South, the increase was 5 percent. Feed costs and variable cash expenses declined across all regions except for the North Central. Gross value of production less cash expenses rose in all regions, in the West change was from -\$16 to \$35 per bred cow. General farm overhead, taxes and insurance, and interest attributable to cow-calf enterprises declined because cow-calf production was a smaller part of the total value of farm commodity production.

Contents

Page

Highlights	ii
List of Tables	v
1991 Production Costs and Returns	1
Structure of Accounts	1
Government Programs and Costs of Production	4
Gross Value of Production	4
Variable and Fixed Cash Expenses	5
Economic (Full-Ownership) Costs	5
Data Sources and Estimation Procedures	6
Farm Costs and Returns Survey	6
References	8
Tables	10
Appendix Tables	96

List of Tables

	Page
1A. U.S. corn production cash costs and returns, 1980-91	10
1B. U.S. corn production economic costs and returns, 1980-91	10
2A. Corn production cash costs and returns, Northeast, 1980-91	11
2B. Corn production economic costs and returns, Northeast, 1980-91	11
3A. Corn production cash costs and returns, Southeast, 1980-91	12
3B. Corn production economic costs and returns, Southeast, 1980-91	12
4A. Corn production cash costs and returns, North Central, 1980-91	13
4B. Corn production economic costs and returns, North Central, 1980-91	13
5A. Corn production cash costs and returns, Plains States, 1980-91	14
5B. Corn production economic costs and returns, Plains States, 1980-91	14
6A. U.S. grain sorghum production cash costs and returns, 1980-91	16
6B. U.S. grain sorghum production economic costs and returns, 1980-91	16
6C. U.S. grain sorghum production cash costs and returns, including direct Government payments and program participation costs, 1990-91	17
6D. U.S. grain sorghum production economic costs and returns, including direct Government payments and program participation costs, 1990-91	17
7A. Grain sorghum production cash costs and returns, Central Plains, 1980-91	18
7B. Grain sorghum production economic costs and returns, Central Plains, 1980-91	18
7C. Grain sorghum production cash costs and returns, including direct Government payments and program participation costs, Central Plains, 1990-91	19
7D. Grain sorghum production economic costs and returns, including direct Government payments and program participation costs, Central Plains, 1990-91	19
8A. Grain sorghum production cash costs and returns, Southern Plains, 1980-91	20
8B. Grain sorghum production economic costs and returns, Southern Plains, 1980-91	20
8C. Grain sorghum production cash costs and returns, including direct Government payments and program participation costs, Southern Plains, 1990-91	21
8D. Grain sorghum production economic costs and returns, including direct Government payments and program participation costs, Southern Plains, 1990-91	21
9A. U.S. oats production cash costs and returns, 1980-91	23
9B. U.S. oats production economic costs and returns, 1980-91	23
11A. Oats production cash costs and returns, Northeast, 1980-91	24
11B. Oats production economic costs and returns, Northeast, 1980-91	24
10A. Oats production cash costs and returns, North Central, 1980-91	25
10B. Oats production economic costs and returns, North Central, 1980-91	25
12A. Oats production cash costs and returns, Northern Plains, 1980-91	26
12B. Oats production economic costs and returns, Northern Plains, 1980-91	26
13A. U.S. barley production cash costs and returns, 1980-91	28
13B. U.S. barley production economic costs and returns, 1980-91	28
14A. Barley production cash costs and returns, Northeast, 1980-91	29
14B. Barley production economic costs and returns, Northeast, 1980-91	29
15A. Barley production cash costs and returns, Northern Plains, 1980-91	30
15B. Barley production economic costs and returns, Northern Plains, 1980-91	30
16A. Barley production cash costs and returns, Northwest, 1980-91	31
16B. Barley production economic costs and returns, Northwest, 1980-91	31
17A. U.S. wheat production cash costs and returns, 1989-91	33
17B. U.S. wheat production economic costs and returns, 1989-91	33

18A.	Wheat production cash costs and returns, North Central, 1989-91	34
18B.	Wheat production economic costs and returns, North Central, 1989-91	34
19A.	Wheat production cash costs and returns, Southeast, 1989-91	35
19B.	Wheat production economic costs and returns, Southeast, 1989-91	35
20A.	Wheat production cash costs and returns, Northern Plains, 1989-91	36
20B.	Wheat production economic costs and returns, Northern Plains, 1989-91	36
21A.	Wheat production cash costs and returns, Central and Southern Plains, 1989-91	37
21B.	Wheat production economic costs and returns, Central and Southern Plains, 1989-91	37
22A.	Wheat production cash costs and returns, Pacific, 1989-91	38
22B.	Wheat production economic costs and returns, Pacific, 1989-91	38
23A.	U.S. soybean production cash costs and returns, 1980-91	40
23B.	U.S. soybean production economic costs and returns, 1980-91	40
24A.	Soybean production cash costs and returns, North Central, 1980-91	41
24B.	Soybean production economic costs and returns, North Central, 1980-91	41
25A.	Soybean production cash costs and returns, Northern Plains, 1989-91	42
25B.	Soybean production economic costs and returns, Northern Plains, 1989-91	42
26A.	Soybean production cash costs and returns, Southeast, 1980-91	43
26B.	Soybean production economic costs and returns, Southeast, 1980-91	43
27A.	Soybean production cash costs and returns, Delta, 1980-91	44
27B.	Soybean production economic costs and returns, Delta, 1980-91	44
28A.	U.S. rice production cash costs and returns, 1980-91	46
28B.	U.S. rice production economic costs and returns, 1980-91	46
28C.	U.S. rice production cash costs and returns, including direct Government payments and program participation costs, 1988-91	47
28D.	U.S. rice production economic costs and returns, including direct Government payments and program participation costs, 1988-91	47
29A.	Rice production cash costs and returns, Arkansas (non-Delta), 1980-91	48
29B.	Rice production economic costs and returns, Arkansas (non-Delta), 1980-91	48
29C.	Rice production cash costs and returns, including direct Government payments and program participation costs, Arkansas (non-Delta), 1988-91	49
29D.	Rice production economic costs and returns, including direct Government payments and program participation costs, Arkansas (non-Delta), 1988-91	49
30A.	Rice production cash costs and returns, Mississippi River Delta, 1980-91	50
30B.	Rice production economic costs and returns, Mississippi River Delta, 1980-91	50
30C.	Rice production cash costs and returns, including direct Government payments and program participation costs, Mississippi River Delta, 1988-91	51
30D.	Rice production economic costs and returns, including direct Government payments and program participation costs, Mississippi River Delta, 1988-91	51
31A.	Rice production cash costs and returns, Gulf Coast, 1980-91	52
31B.	Rice production economic costs and returns, Gulf Coast, 1980-91	52
31C.	Rice production cash costs and returns, including direct Government payment and program participation costs, Gulf Coast, 1988-91	53
31D.	Rice production economic costs and returns, including direct Government payments and program participation costs, Gulf Coast, 1988-91	53
32A.	Rice production cash costs and returns, California, 1980-91	54
32B.	Rice production economic costs and returns, California, 1980-91	54
32C.	Rice production cash costs and returns, including direct Government payments and program participation costs, California, 1988-91	55
32D.	Rice production economic costs and returns, including direct Government payments and program participation costs, California, 1988-91	55
33A.	U.S. peanut production cash costs and returns, 1980-91	57

33B.	U.S. peanut production economic costs and returns, 1980-91	57
34A.	Peanut production cash costs and returns, Virginia and North Carolina, 1980-91	58
34B.	Peanut production economic costs and returns, Virginia and North Carolina, 1980-91	58
35A.	Peanut production cash costs and returns, Southeast, 1980-91	59
35B.	Peanut production economic costs and returns, Southeast, 1980-91	59
36A.	Peanut production cash costs and returns, Southern Plains, 1980-91	60
36B.	Peanut production economic costs and returns, Southern Plains, 1980-91	60
37A.	U.S. cotton production cash costs and returns, 1980-91	62
37B.	U.S. cotton production economic costs and returns, 1980-91	62
38A.	Cotton production cash costs and returns, Southeast, 1980-91	63
38B.	Cotton production economic costs and returns, Southeast, 1980-91	63
39A.	Cotton production cash costs and returns, Delta, 1980-91	64
39B.	Cotton production economic costs and returns, Delta, 1980-91	64
40A.	Cotton production cash costs and returns, Southern Plains, 1980-91	65
40B.	Cotton production economic costs and returns, Southern Plains, 1980-91	65
41A.	Cotton production cash costs and returns, Southwest, 1980-91	66
41B.	Cotton production economic costs and returns, Southwest, 1980-91	66
42A.	U.S. milk production cash costs and returns, per cow, 1980-91	68
42B.	U.S. milk production economic costs and returns, per cow, 1980-91	68
43A.	U.S. milk production cash costs and returns, per cwt, 1980-91	69
43B.	U.S. milk production economic costs and returns, per cwt, 1980-91	69
44A.	Milk production cash costs and returns, per cow, Northeast, 1980-91	70
44B.	Milk production economic costs and returns, per cow, Northeast, 1980-91	70
45A.	Milk production cash costs and returns, per cwt, Northeast, 1980-91	71
45B.	Milk production economic costs and returns, per cwt, Northeast, 1980-91	71
46A.	Milk production cash costs and returns, per cow, Appalachia, 1981-91	72
46B.	Milk production economic costs and returns, per cow, Appalachia, 1980-91	72
47A.	Milk production cash costs and returns, per cwt, Appalachia, 1980-91	73
47B.	Milk production economic costs and returns, per cwt, Appalachia, 1980-91	73
48A.	Milk production cash costs and returns, per cow, Southeast, 1985-91	74
48B.	Milk production economic costs and returns, per cow, Southeast, 1985-91	74
49A.	Milk production cash costs and returns, per cwt, Southeast, 1985-91	75
49B.	Milk production economic costs and returns, per cwt, Southeast, 1985-91	75
50A.	Milk production cash costs and returns, per cow, Upper Midwest, 1980-91	76
50B.	Milk production economic costs and returns, per cow, Upper Midwest, 1980-91	76
51A.	Milk production cash costs and returns, per cwt, Upper Midwest, 1980-91	77
51B.	Milk production economic costs and returns, per cwt, Upper Midwest, 1980-91	77
52A.	Milk production cash costs and returns, per cow, Corn Belt, 1980-91	78
52B.	Milk production economic costs and returns, per cow, Corn Belt, 1980-91	78
53A.	Milk production cash costs and returns, per cwt, Corn Belt, 1980-91	79
53B.	Milk production economic costs and returns, per cwt, Corn Belt, 1980-91	79
54A.	Milk production cash costs and returns, per cow, Southern Plains, 1980-91	80
54B.	Milk production economic costs and returns, per cow, Southern Plains, 1980-91	80
55A.	Milk production cash costs and returns, per cwt, Southern Plains, 1980-91	81
55B.	Milk production economic costs and returns, per cwt, Southern Plains, 1980-91	81
56A.	Milk production cash costs and returns, per cow, Pacific, 1980-91	82
56B.	Milk production economic costs and returns, per cow, Pacific, 1980-91	82
57A.	Milk production cash costs and returns, per cwt, Pacific, 1980-91	83
57B.	Milk production economic costs and returns, per cwt, Pacific, 1980-91	83
58A.	U.S. cow-calf production cash costs and returns, 1990-91	85
58B.	U.S. cow-calf production economic costs and returns, 1990-91	85

58A.	U.S. cow-calf production cash costs and returns, 1980-89	86
58B.	U.S. cow-calf production economic costs and returns, 1980-89	86
59A.	Cow-calf production cash costs and returns, North Central, 1990-91	87
59B.	Cow-calf production economic costs and returns, North Central, 1990-91	87
59C.	Cow-calf production cash costs and returns, North Central, 1980-89	88
59D.	Cow-calf production economic costs and returns, North Central, 1980-89	88
60A.	Cow-calf production cash costs and returns, South, 1990-91	89
60B.	Cow-calf production economic costs and returns, South, 1990-91	89
60C.	Cow-calf production cash costs and returns, South, 1980-89	90
60D.	Cow-calf production economic costs and returns, South, 1980-89	90
61A.	Cow-calf production cash costs and returns, Great Plains, 1990-91	91
61B.	Cow-calf production economic costs and returns, Great Plains, 1990-91	91
61C.	Cow-calf production cash costs and returns, Great Plains, 1980-89	92
61D.	Cow-calf production economic costs and returns, Great Plains, 1980-89	92
62A.	Cow-calf production cash costs and returns, West, 1990-91	93
62B.	Cow-calf production economic costs and returns, West, 1990-91	93
62C.	Cow-calf production cash costs and returns, West, 1980-89	94
62D.	Cow-calf production economic costs and return, West, 1980-89	94

Economic Indicators of the Farm Sector

Costs of Production, 1991--Major Field Crops and Livestock and Dairy

1991 Production Costs and Returns

Average U.S. economic costs of producing wheat, milk, and cow-calf declined in 1991, while sorghum, barley, soybean, and rice production costs were higher than in 1990 (fig 1). Prices paid for most major input items showed slight gains over 1990, while seed and energy costs remained relatively stable (fig 2). Variable cash expenses were largely unchanged for corn and wheat, while declining for milk and oats. Estimates for 1990 through 1991 for cow-calf, and for 1989 through 1991 for milk production, were revised to make the methodology consistent with that used for field crops.

This year's *Costs of Production* incorporates new production practice and expenditure data from the cotton, peanut, and corn versions of the 1991 Farm Costs and Returns Survey (FCRS). Costs for 1989 through 1991 were revised for cow-calf and milk production to align estimation procedures and concepts with those used for major field crops.

The Agriculture and Consumer Protection Act of 1973 and subsequent legislation require that the Department of Agriculture annually estimate costs of producing wheat, feed grains, cotton, milk, rice, peanuts, sugar beets, sugarcane, and tobacco. Regional and U.S. estimates for these commodities, except sugar beets, sugarcane, and tobacco, are presented in this report.

Although the estimates are often called budgets, they are not projections or goals, but historical estimates of costs, reflecting actual levels of input use, production practices, yields, and prices as measured by surveys of producers and suppliers. Costs include both cash expenditures, by farm operators and landlords, and economic costs of production. *Direct payments for and costs of participation in Government programs are excluded except as discussed later.*

Structure of Accounts

ERS cost-of-production accounts include estimates of both cash expenditures and noncash costs. Cash expenditures are incurred when factors of production are purchased or rented. Noncash costs occur when factors are owned. For example, if a farmer fully owns the land used to produce corn, he would have no expenditure for land rental or for loans to pay for the purchase of land. Yet, an economic cost arises. By owning the land and using it to grow corn, the farmer forgoes income from other uses of the land, such as renting it to another producer. Costs come about because production resources are limited and have alternative uses. If a farmer uses savings to pay for operating inputs, such as seed, fertilizer, chemicals, and fuel, and thus pays no interest on operating loans, the farmer still incurs an economic cost because the savings could have earned a return in another use. Owned inputs are not without cost.

ERS combines in a single account the production costs and returns of farm operators and landlords. If a landlord pays a share of a farmer's costs, such as fertilizer, as part of a rental agreement, then those costs are added to the operator's costs and subtracted from the rental value of the land. Land rent is not included as a *cash* expense because what is a rental expense to the farm operator is offsetting income to the landlord. An ownership cost is imputed instead to land and is included as an economic cost.

Production costs are balanced with values of production (fig. 3). Total economic costs, including returns to all factors of production, are equal to gross value of production. Crops are valued at their time of harvest. Marketing costs and returns are excluded. Costs, including hauling and drying, are measured to the point of first sale or storage. Storage costs are excluded.

Figure 1

Variable cash expenses per planted acre, 1989-91

Dollars

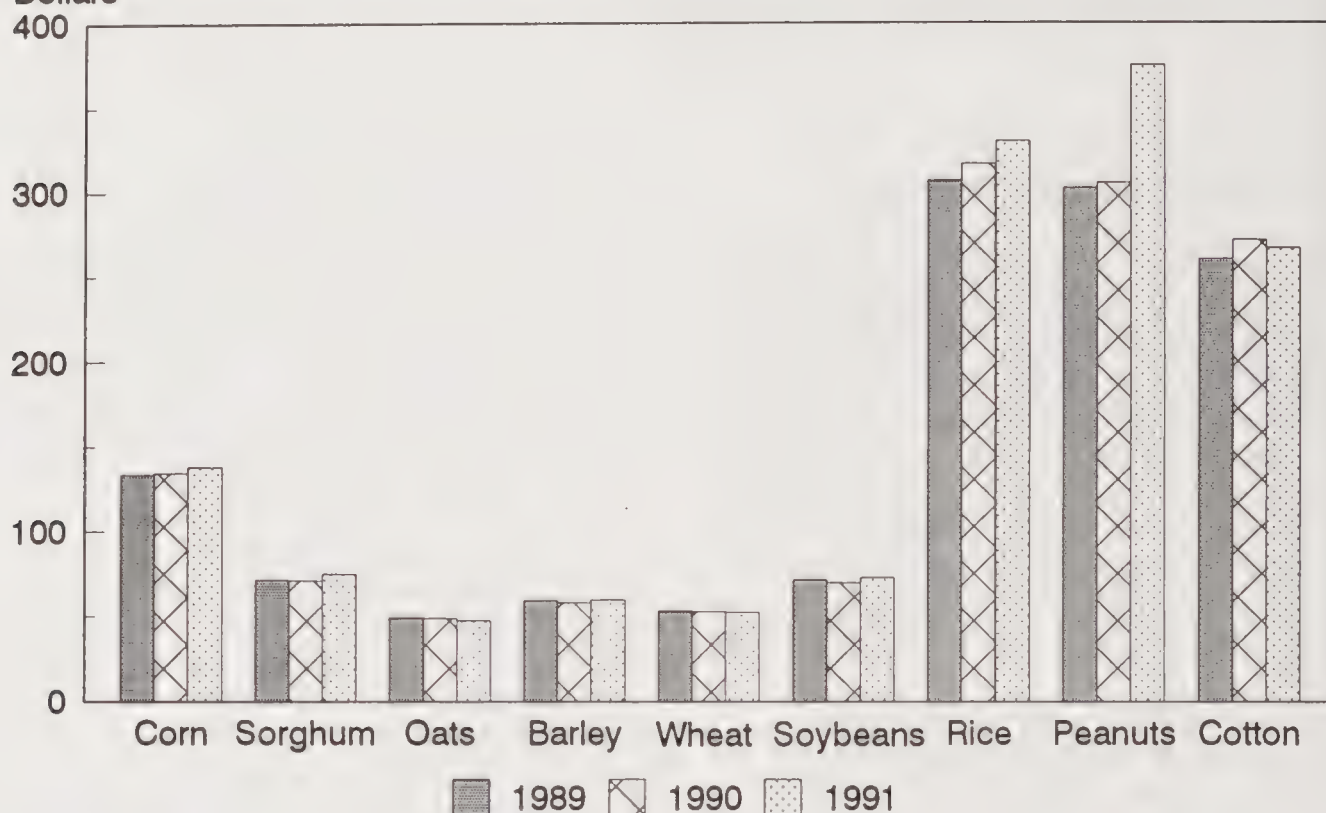
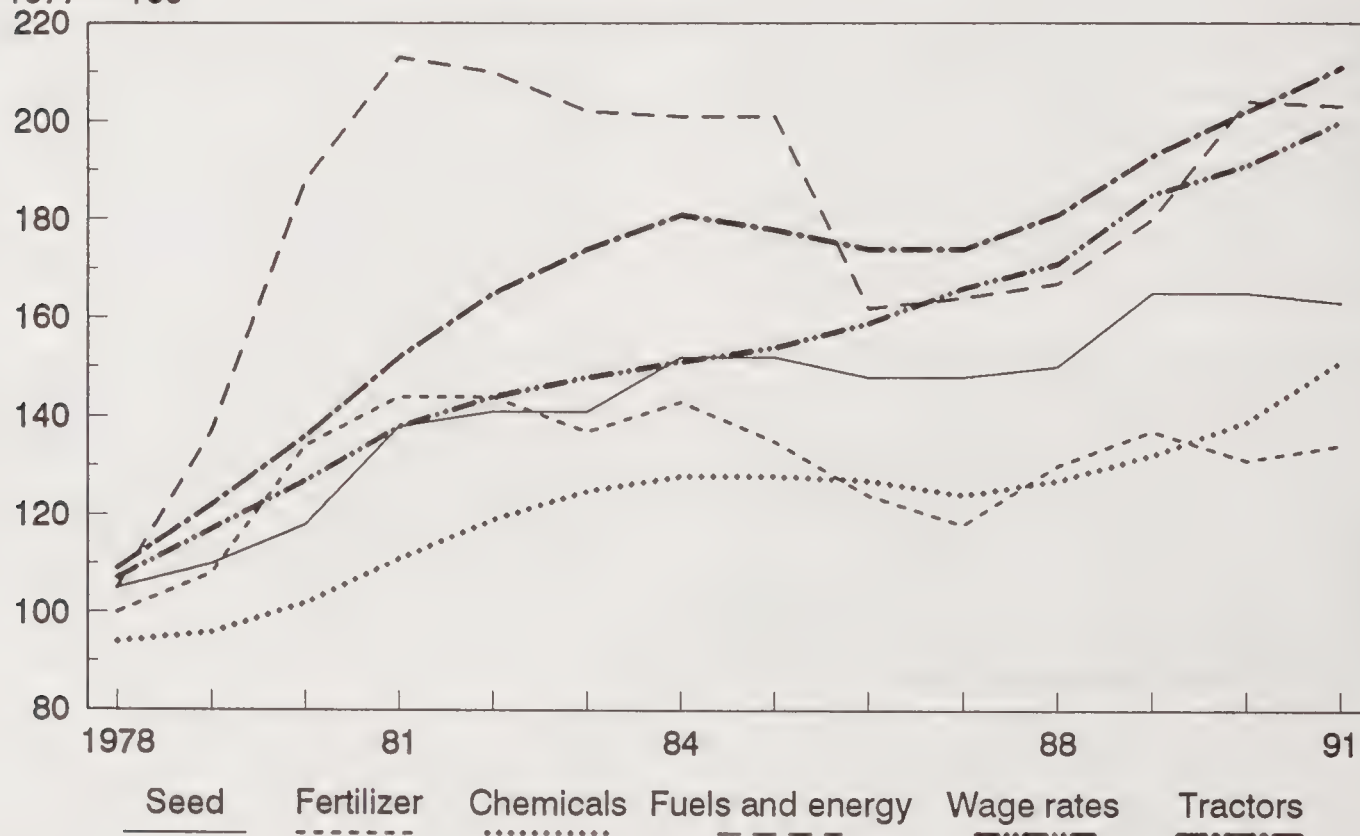


Figure 2

Indexes of prices paid, 1978-91

1977 = 100



Some major field crops yield secondary crops, for example, cottonseed from cotton and straw from oats, barley, and wheat. Production costs for the secondary crops cannot be separated from those of the major crops. Therefore, ERS includes estimates of the values of production of secondary crops in order to balance production costs with gross value of production. The value of a secondary crop, especially straw in the North Central region, can be considerable.

Livestock commodities (including milk) are valued at annual average market prices. The total returns category includes receipts from both primary and secondary products of livestock production. Examples of secondary products would be cull dairy cows and dairy calves.

Gross value of production minus cash expenses is a short-term return to production and measures the amount of cash that would be left to cover longer term costs, such as machinery replacement, debt retirement, or, in the case of producers who rent land, to land rental payment.

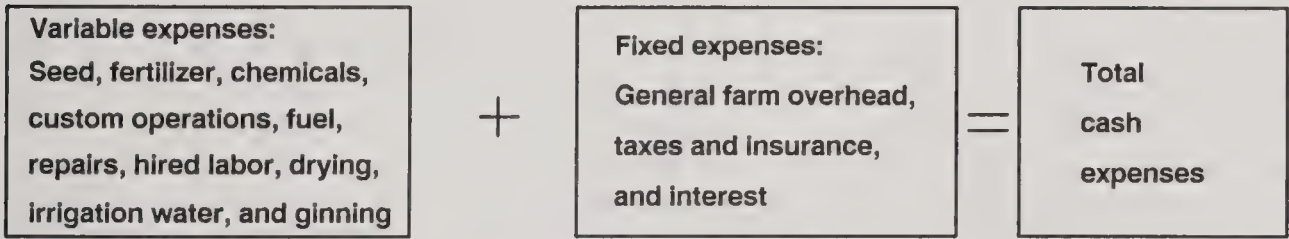
ERS prepares crop production cost estimates on a per-planted-acre basis. Costs are included only for acreage that was planted with the intention of being harvested for grain. Excluded are corn and sorghum silage and small grains planted only as cover crops or for grazing. Costs are included for production that is abandoned because of crop damage. On double-cropped acreage (two crops on the same land in the same growing season), land costs are divided between the two crops. For crops that are planted following a fallow season, 2 years of land costs are counted.

Livestock cost estimates are reported on a per-head basis and/or on a per-hundredweight sold or marketed basis.

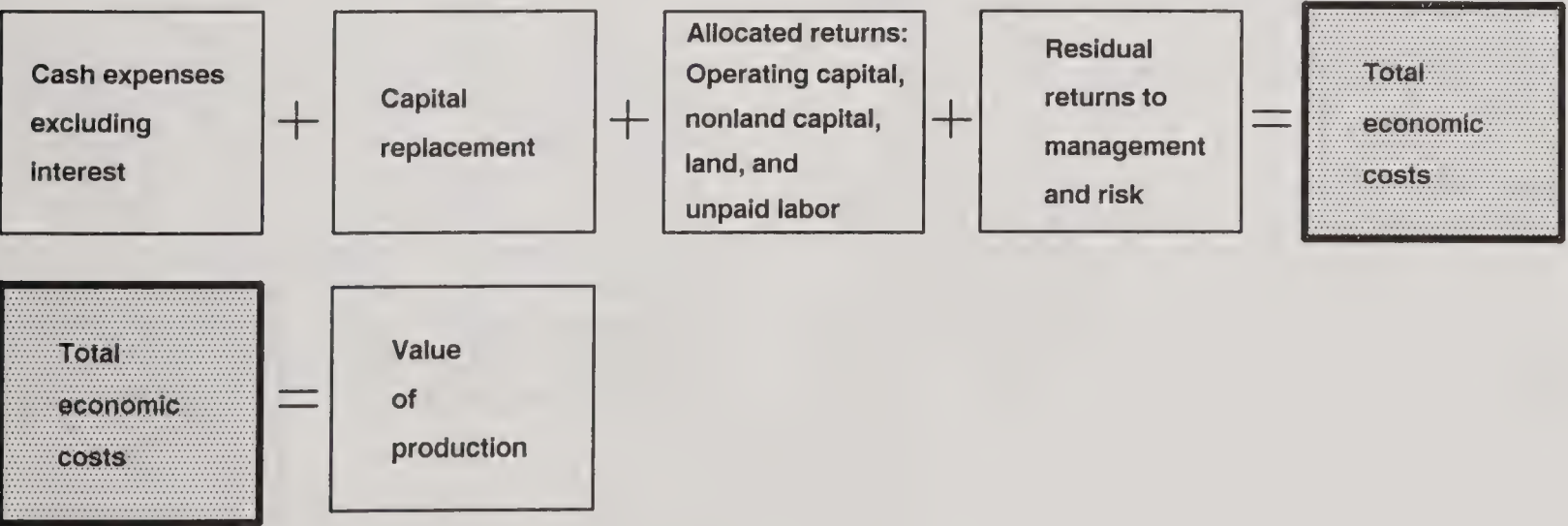
Most commodities are produced on farms which have multiple production or service enterprises; farm machinery, equipment, buildings, and their costs are shared by the various enterprises on the farm. ERS allocates machinery operating costs and capital

Figure 3
Structure of accounts

Cash costs



Economic costs



replacement costs to a particular commodity enterprise based on estimates of hours that the machine is used on that commodity relative to total hours of annual use. General farm overhead expenses and interest payments are allocated to an individual enterprise based on that commodity share of gross value of production.

Government Programs and Costs of Production

Government commodity programs most prominently affect ERS cost-of-production accounts by affecting commodity prices. ERS allocates some whole-farm expenses and calculates share rental costs and residual returns to management and risk from commodity prices. The market prices that ERS uses can be influenced by Government nonrecourse loan and marketing loan programs. Thus, effects of these programs on prices are included in the cost-of-production estimates. Direct Government payments and participation costs in farm income support programs, however, are generally excluded.

The Government's Commodity Credit Corporation (CCC) operates nonrecourse loan programs for corn, grain sorghum, barley, oats, wheat, rice, soybeans, peanuts, and upland cotton. The programs enable producers to use a crop as collateral for a nonrecourse loan. Producers may either repay the loan and sell the crop on the market or forfeit the crop to the CCC at no cost other than storage. Prices are supported as crops are temporarily removed from the market.

Marketing loan programs, which operate for rice and cotton, allow prices to fall below CCC loan rates. Participants can repay loans at either the loan rate or the world price, whichever is lower. Proceeds from marketing loans, that is, the difference between the world price and the nonrecourse loan rate, are included only in the rice estimates that incorporate direct Government payments.

Milk prices are supported through direct market intervention by Commodity Credit Corporation purchases of manufactured dairy products (butter, cheese, and nonfat dry milk). The Government also affects prices for milk and meat by limiting the quantity of milk and meat imports. In addition, the Government assists producers in emergencies caused by natural disasters.

The Government operates deficiency payment programs for corn, grain sorghum, barley, oats, wheat, rice, and upland cotton. Farmers and landlords, if they participate in the programs, may receive *direct payments* based on proven yields. Payment rates are calculated as the lesser of either the difference between the CCC loan rate and the Government-established target price or the market price and the target price. A participant may be required to idle acreage that would have been planted to the crop in return for direct payments on the remaining acreage. Participants may also be required to incur costs by maintaining a cover crop or controlling weeds on the idled acreage. ERS has not included the participation costs and the direct payments in the cost-of-production estimates. Beginning with the 1988 rice and 1990 sorghum estimates, ERS presents an additional set of cost-of-production estimates that includes direct Government payments and program participation costs for rice and grain sorghum. Included are costs and returns associated with both planted acreage and acreage idled by program participants.

Gross Value of Production

ERS crop enterprise accounts begin with estimates of value of production per acre for each crop. Gross value of production is defined as the value of the primary and secondary crops at the time of harvest. ERS generally excludes deficiency payments, paid land diversions, and marketing loan proceeds from gross value of production. Also excluded are income from crop insurance indemnities and disaster assistance payments. An additional set of estimates for rice and sorghum includes deficiency payments and marketing loan proceeds. There was no paid land diversion for rice. There were no marketing loans for sorghum.

The gross value of production for livestock commodities is presented as cash receipts from the primary and secondary products, as well as any other related sources of income to the enterprise. Any direct Government program benefits are excluded from receipts. To ensure consistency between costs and returns, income from Federal crop insurance, cooperative memberships, and manure sales are added to gross value of production (and reported as "other income") when expenses for these items are not separable from other farm enterprise expenses.

Variable and Fixed Cash Expenses

Cash expenses represent the amount of money spent during the production process. Variable cash expenses associated with crop production include seed, fertilizer, chemicals, custom operations, hired labor, fuel, repairs, purchased irrigation water, drying, cotton ginning, and technical services, such as insect scouting and soil testing. For livestock and milk production the major variable expense items are feed, energy, machinery and building repairs, and labor. Variable cash expenses depend upon production practices as well as quantities and prices of inputs used.

Fixed cash expenses include real estate and property taxes, insurance, general farm overhead, and interest paid on operating loans and real estate loans. Items considered general farm overhead may vary between crop and livestock enterprises, but generally represent factors of production whose services are utilized but are not directly attributable to any single production activity on the farm. Some examples of general farm overhead include legal fees, magazine subscriptions, farm utilities, and other general business expenses. Fixed cash expenses, which are difficult to assign directly to a specific enterprise on a farm, are allocated to each crop based on its relative share of the total value of production.

Economic (Full-Ownership) Costs

Economic costs are long-term costs that account for all production inputs, without regard to the ownership or equity positions of farm operators. Full-ownership costs are charged. Economic costs include both variable and fixed cash expenses (except cash interest payments), capital replacement, imputed costs of land, unpaid labor, capital invested in production inputs and machinery, and residual returns to management and risk. Cash expenses are valued by market prices or by expenditures reported by farmers. Opportunity costs (noncash) are measured from values of capital, land, and unpaid labor in alternative uses. Opportunity costs are called allocated returns to owned inputs, in accord with the full-ownership definition.

Capital replacement. Capital replacement is the portion of the value of machinery and equipment, in addition to repairs, that is used up in the production process. It is based on the current value of the machinery. Capital replacement may be regarded as a

discretionary expense in any particular year. It may be deferred when income is low but ultimately must be paid to maintain the capital stock.

Operating and other nonland capital. The cost of, or the return to, operating capital is the cost of carrying input expenses from the time they are used until harvest. ERS measures the return to operating capital at the annual average rate on 6-month U.S. Treasury bills. The return to other nonland capital is the cost of having capital invested in farm machinery and equipment. ERS calculates this cost as equal to the sectorwide longrun rate of return to production assets.

Land. Cropland is a specialized input. Its value depends on the value of the crops that it produces, which is reflected in share and cash rental costs. Because an alternative use for land for any one landowner is to rent it to someone who will produce the same crop, ERS values land in the cost-of-production accounts at its rental value. The land rental rates for each crop are composite share and cash rental rates. ERS calculates the share rental value directly from the actual yield and price of the crop. Cash rental rates, which are fixed at the outset of production, presumably reflect expectations about crop yields and prices. The net land rent (gross rent minus real estate taxes and the value of inputs supplied by landlords and adjusted for double-cropping and fallow rotation) is applied to all acreage, regardless of whether it is owned or rented by the farm operator.

Government commodity programs, which support crop prices and make payments to farm operators and landlords based on yields, affect the costs of land. When ERS excludes direct Government payments from gross value of production, it also excludes the payments from the share rent. Including the payments would increase the share rental charge when the crop's market price is below the direct Government payment level.

Unpaid labor. Labor costs are divided between hired and unpaid labor depending upon whether a cash wage is paid. ERS counts hired labor as a variable cash expense and imputes a value to unpaid labor based on estimated hours worked and average agricultural wage rates. Unpaid labor is included as a noncash cost. Additional value of labor, such as for managerial and entrepreneurial skill, is reflected in residual returns.

Residual returns to management and risk.

The difference between gross value of production and the total of cash expenses except interest, allocated returns to operating capital, other nonland capital, land, and unpaid labor is residual returns to management and risk. Returns to management are expected to be positive, though their level is not known. Because of variability in weather and commodity prices, which are beyond a farmer's control, returns to risk in any particular year may be positive or negative. Over time, however, they should average zero. Combined returns to management and risk, therefore, are expected to be positive.

For some commodities, the average returns to production management and risk shown in ERS accounts have been consistently negative in recent years. Because direct Government payments are excluded from the accounts, the estimated gross value of production may be less than what farmers actually receive. Although costs, particularly for land, would also increase if direct Government payments were included, residual returns may be greater than shown. Net returns to marketing a crop beyond production may also be positive.

Data Sources

The primary data source for annual cost-of-production estimates is the Farm Costs and Returns Survey (FCRS). It is supplemented with price and production data from other sources, mainly *Agricultural Prices* (7) and *Crop Production* (8). Seed, fertilizer, and machinery operating costs are generally derived from producers' descriptions of inputs, field operations, and machinery used on a particular crop and from input price and machinery performance data. Other variable cash expenses and fixed cash expenses come from producers' estimates of expenditures (5).

ERS calculates cost-of-production estimates using farm-level estimation procedures. Commodity specific models have been developed for rice, wheat, grain sorghum, soybeans, corn, peanuts, cotton, milk, and cow-calf commodities. A farm-level model calculates production costs for each farm in the FCRS and then

aggregates the costs to produce regional and U.S. estimates. The farm-level approach to cost estimation allows greater differentiation in costs between farms and more detailed analysis of cost-of-production information.

Farm Costs and Returns Survey

The FCRS is conducted annually by ERS and the National Agricultural Statistics Service (NASS). Each year, there are multiple versions of the FCRS: an indepth whole-farm version and commodity cost-of-production versions. All versions have common questions about whole-farm expenses and income. Each cost-of-production version gathers more detailed information about input use, field operations, and production costs of a particular crop.

The FCRS is a multiframe stratified survey. The sample is drawn from stratified list and area frames. For a particular cost-of-production version, the list frame is made up of farms known to have produced the commodity previously. The list frame is stratified by size. The area frame is made up of land segments, stratified by land use. Each sampled farm represents a number of similar farms, the particular number being the survey expansion factor, which is the inverse of the probability of the sampled farm being selected. Data are expanded by the survey expansion factors to produce estimates for the population of all farms producing the commodity.

Farmers are interviewed in person by field enumerators using questionnaires developed by NASS and ERS. The FCRS takes place during February and March, with questions being asked about production in the previous year.

FCRS base years. Because of survey costs, USDA cannot undertake detailed cost-of-production surveys of every major field crop in every year. Instead, the FCRS covers each commodity in detail about every 4 to 5 years (fig. 4). ERS updates the FCRS-based costs from other data sources in nonsurvey years.

Figure 4

Basis years for costs of production estimates, 1984-91 1/

	1984	1985	1986	1987	1988	1989	1990	1991
Corn	1982-83		1987					1991
Sorghum	1982-83	1986					1990	
Oats	1982-83				1988			
Barley	1982-83		1987					
Wheat	1982-83	1986				1989		
Rice	1984		1988					
Soybeans	1982-83	1986					1990	
Peanuts	1982-83		1987					1991
Cotton	1982-83		1987					1991
Dairy	1982-83		1985			1989		
Cow-Calf	1980						1990	

1/ Years in shaded areas indicate Farm Costs and Returns Survey year for the time period shown.

Note: Costs are estimated annually between survey years.

Statistical precision. The FCRS, like other surveys, is not a complete enumeration of all farms. A sample is chosen to represent all farms producing a particular commodity. There are many possible samples, each of which can yield different estimates even if the same questionnaires, instructions, and enumerators are used.

The variation in estimates that comes simply from different possible samples is called sampling error. Sampling "error" is not the result of mistakes. It arises because any randomly chosen sample may not exactly match the population of all farms: the values of data items can differ from farm to farm and only some of the farms are selected in a sample.

Sampling error is controlled in the FCRS by the sample size and by carefully grouping or stratifying similar farms before samples of each group or stratum are drawn. By measuring the differences in a data item

within the groups, ERS measures FCRS sampling errors, an indication of how far the value in the sample may be from the "true" value for all farms. Chemical costs per acre, an item that is measured solely from the FCRS, had sampling errors of about 4 percent for the U.S. rice, wheat, and soybean estimates. This means that there is a 95-percent probability that the FCRS estimates are within about 8 percent of the "true" costs.

Survey data may also contain nonsampling errors, such as misstating of questions by enumerators and inability or unwillingness of respondents to give accurate answers. Nonsampling errors are controlled in the FCRS by designing and pretesting questions so that they can be answered easily and accurately from farm records, by training and supervising enumerators who are familiar with farming in the surveyed areas, and by reviewing data for consistency.

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Figure 5

Corn Production Regions

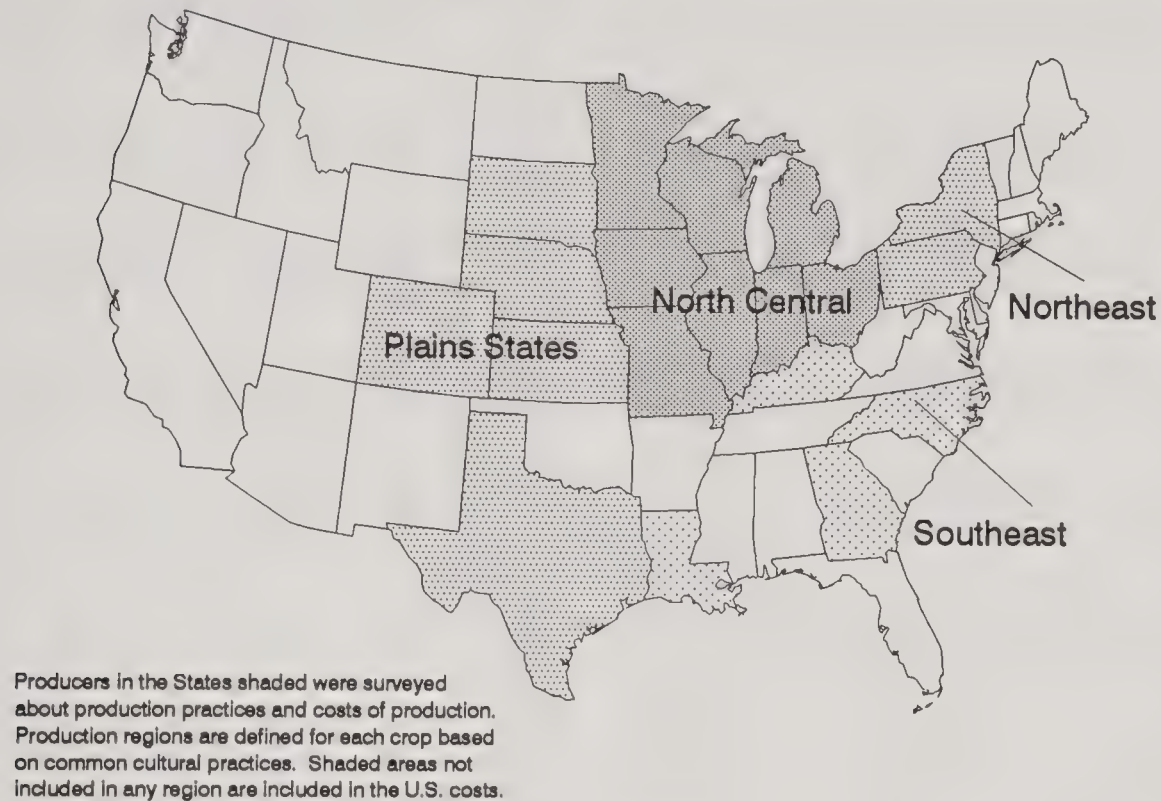
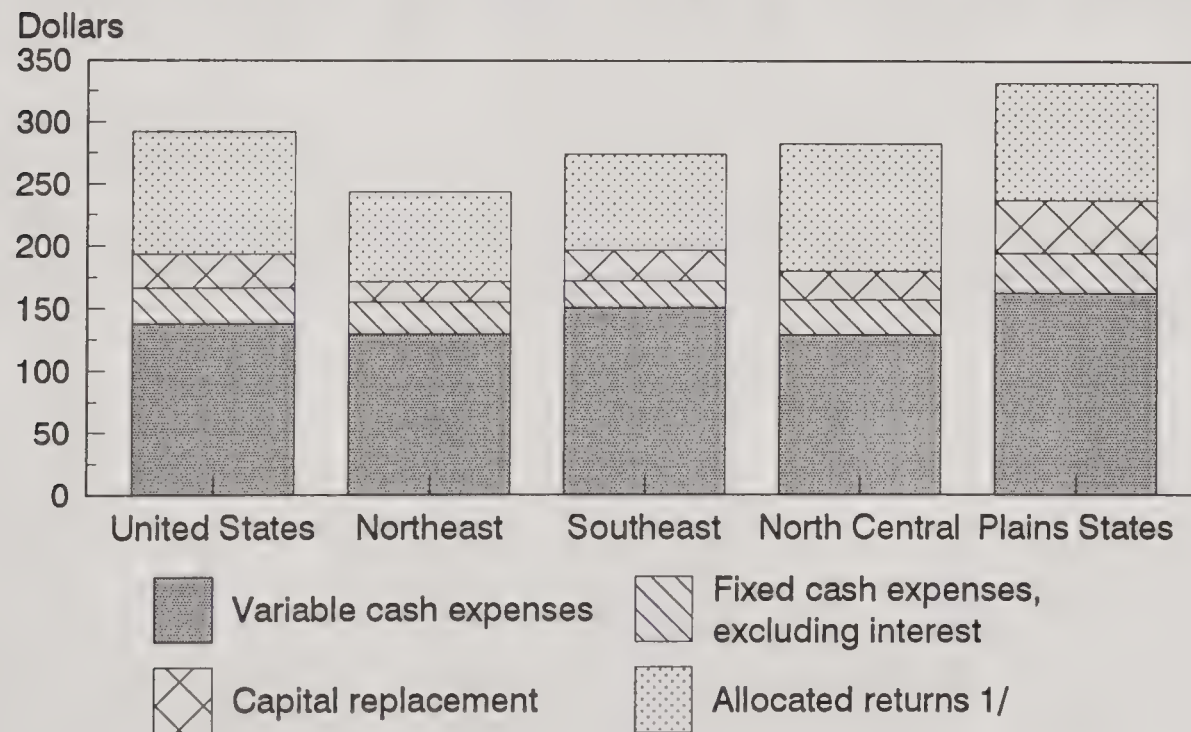


Figure 6

Corn production economic costs per planted acre, 1991



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to corn production rather than some other income-producing use.

Table 1A--U.S. corn production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	279.46	260.17	243.63	252.90	273.23	252.63	167.60	186.02	217.14	254.92	257.82	254.84
Total, gross value of production	279.46	260.17	243.63	252.90	273.23	252.63	167.60	186.02	217.14	254.92	257.82	254.84
Cash expenses:												
Seed	14.24	16.16	16.45	16.65	18.03	18.48	19.25	18.86	18.90	21.02	20.52	21.61
Fertilizer, lime, and gypsum	48.67	53.41	51.18	49.62	52.56	52.65	40.77	37.50	45.39	47.21	42.58	44.59
Chemicals	14.24	15.56	18.24	19.12	19.51	19.51	20.27	20.19	20.49	21.51	22.64	22.46
Custom operations 1/	4.76	5.48	7.56	7.52	7.70	7.64	5.62	5.65	4.94	6.02	6.28	9.21
Fuel, lube, and electricity	23.74	28.47	24.99	20.95	19.45	22.87	18.22	18.80	16.59	20.12	24.00	18.92
Repairs	10.25	11.98	10.75	10.34	11.12	11.05	8.10	8.25	8.10	8.94	9.28	13.31
Hired labor	3.39	3.87	3.78	3.52	3.83	4.02	7.87	7.83	7.87	8.29	8.61	7.37
Other variable cash expenses 2/	0.09	0.16	0.58	0.58	0.59	0.58	0.31	0.31	0.32	0.31	0.30	0.41
Total, variable cash expenses	119.38	135.09	133.52	128.30	132.79	136.81	120.41	117.39	122.60	133.42	134.21	137.88
General farm overhead	16.60	15.43	16.20	15.22	15.37	10.93	10.42	10.15	10.81	10.42	12.06	10.39
Taxes and insurance	14.55	14.92	13.93	13.45	17.00	17.47	13.81	14.65	14.59	14.87	14.85	17.98
Interest	34.69	41.93	47.31	45.10	45.91	32.72	20.96	16.11	14.94	15.13	16.65	16.79
Total, fixed cash expenses	65.84	72.28	77.44	73.77	78.28	61.12	45.19	40.91	40.34	40.42	43.56	45.16
Total, cash expenses	185.22	207.37	210.96	202.07	211.07	197.93	165.60	158.30	162.94	173.84	177.77	183.04
Gross value of production less cash expenses	94.24	52.80	32.67	50.83	62.16	54.70	2.00	27.72	54.20	81.08	80.05	71.80
Harvest-period price (dollars/bu.)	3.10	2.38	2.14	3.21	2.58	2.15	1.41	1.57	2.61	2.22	2.19	2.31
Yield (bu./planted acre)	90.15	109.28	113.76	78.76	105.79	117.29	118.46	118.83	83.22	115.03	117.50	110.38

Table 1B--U.S. corn production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	279.46	260.17	243.63	252.90	273.23	252.63	167.60	186.02	217.14	254.92	257.82	254.84
Total, gross value of production	279.46	260.17	243.63	252.90	273.23	252.63	167.60	186.02	217.14	254.92	257.82	254.84
Economic (full ownership) costs:												
Variable cash expenses	119.38	135.09	133.52	128.30	132.79	136.81	120.41	117.39	122.60	133.42	134.21	137.88
General farm overhead	16.60	15.43	16.20	15.22	15.37	10.93	10.42	10.15	10.81	10.42	12.06	10.39
Taxes and insurance	14.55	14.92	13.93	13.45	17.00	17.47	13.81	14.65	14.59	14.87	14.85	17.98
Capital replacement	25.29	28.01	33.25	33.56	33.73	34.62	29.77	30.08	30.95	34.01	35.61	27.23
Operating capital	5.57	7.42	6.03	4.75	5.42	4.36	2.53	2.75	3.41	4.19	3.82	3.75
Other nonland capital	5.31	5.41	5.89	5.19	6.78	6.56	5.29	5.25	6.12	8.14	9.28	10.17
Land	66.27	61.32	51.29	47.95	67.63	54.82	41.19	44.26	52.83	57.80	59.63	61.61
Unpaid labor	9.63	11.00	10.74	10.03	10.30	11.45	19.70	20.04	21.26	22.04	23.06	23.54
Total, economic costs	262.60	278.60	270.86	258.45	289.61	277.02	243.12	244.57	262.57	284.89	292.52	292.55
Residual returns to management and risk	16.86	-18.43	-27.23	-5.55	-16.38	-24.39	-75.52	-58.55	-45.43	-29.97	-34.70	-37.71
Harvest-period price (dollars/bu.)	3.10	2.38	2.14	3.21	2.58	2.15	1.41	1.57	2.61	2.22	2.19	2.31
Yield (bu./planted acre)	90.15	109.28	113.76	78.76	105.79	117.29	118.46	118.83	83.22	115.03	117.50	110.38

1/ Includes cost of technical services and commercial drying. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1986 and 1991.

Table 2A--Corn production cash costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	274.18	241.99	214.90	272.93	313.71	268.95	160.41	158.08	214.14	256.28	272.58	156.53
Total, gross value of production	274.18	241.99	214.90	272.93	313.71	268.95	160.41	158.08	214.14	256.28	272.58	156.53
Cash expenses:												
Seed	13.42	14.60	14.56	14.22	16.16	17.46	19.56	19.34	19.46	22.09	20.83	21.15
Fertilizer, lime, and gypsum	53.97	58.45	56.28	52.51	55.21	54.35	45.08	43.72	50.21	55.77	50.68	41.77
Chemicals	15.21	16.55	18.14	19.05	19.47	19.50	18.19	18.17	18.47	19.33	20.30	21.59
Custom operations 1/	6.37	6.95	8.26	8.07	8.61	11.42	8.81	8.65	7.09	9.61	9.38	9.11
Fuel, lube, and electricity	19.20	24.32	19.26	16.85	17.12	19.19	11.40	11.78	11.48	13.77	15.16	12.50
Repairs	8.33	9.78	10.58	10.25	12.27	12.08	9.92	9.76	9.65	11.36	11.33	10.90
Hired labor	3.81	4.33	4.20	3.99	4.41	4.61	6.69	6.64	6.83	7.22	7.42	12.83
Other variable cash expenses 2/	0.00	0.00	0.28	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	120.31	134.98	131.56	125.22	133.54	138.90	119.65	118.06	123.30	139.15	135.10	129.85
General farm overhead	36.05	21.86	14.40	25.19	25.60	20.60	7.94	7.76	8.23	7.96	9.21	5.39
Taxes and insurance	12.79	14.40	15.25	16.34	17.64	18.69	15.51	15.26	15.47	16.02	15.73	19.64
Interest	52.01	33.94	40.48	31.61	37.91	34.51	8.83	6.85	6.25	6.43	7.08	3.00
Total, fixed cash expenses	100.85	70.20	70.13	73.14	81.15	73.80	32.28	29.87	29.95	30.41	32.02	28.03
Total, cash expenses	221.16	205.18	201.69	198.36	214.69	212.70	151.93	147.93	153.25	169.56	167.12	157.88
Gross value of production less cash expenses	53.02	36.81	13.21	74.57	99.02	56.25	8.48	10.15	60.89	86.72	105.46	-1.35
Harvest-period price (dollars/bu.)	3.50	2.52	2.24	3.70	2.94	2.45	1.74	1.77	3.08	2.60	2.51	2.55
Yield (bu./planted acre)	78.41	95.98	95.75	73.69	106.55	109.75	92.42	89.20	69.61	98.72	108.79	61.34

Table 2B--Corn production economic costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	274.18	241.99	214.90	272.93	313.71	268.95	160.41	158.08	214.14	256.28	272.58	156.53
Total, gross value of production	274.18	241.99	214.90	272.93	313.71	268.95	160.41	158.08	214.14	256.28	272.58	156.53
Economic (full ownership) costs:												
Variable cash expenses	120.31	134.98	131.56	125.22	133.54	138.90	119.65	118.06	123.30	139.15	135.10	129.85
General farm overhead	36.05	21.86	14.40	25.19	25.60	20.60	7.94	7.76	8.23	7.96	9.21	5.39
Taxes and insurance	12.79	14.40	15.25	16.34	17.64	18.69	15.51	15.26	15.47	16.02	15.73	19.64
Capital replacement	21.32	23.51	26.18	26.54	29.65	30.19	30.67	30.39	31.71	34.99	36.10	16.44
Operating capital	5.28	6.97	5.37	4.14	4.76	3.98	2.46	2.72	3.37	4.26	3.85	3.53
Other nonland capital	4.47	4.52	5.20	6.65	6.55	6.32	6.19	6.02	7.22	9.80	10.72	8.45
Land	27.44	28.60	24.50	27.86	29.83	26.31	24.33	25.70	30.80	33.73	31.94	29.79
Unpaid labor	10.86	12.34	11.96	11.35	12.54	13.14	20.95	19.93	23.52	24.31	25.04	30.35
Total, economic costs	238.52	247.18	234.42	241.29	260.10	258.12	227.70	225.84	243.62	270.22	267.69	243.44
Residual returns to management and risk	35.66	-5.19	-19.52	31.64	53.61	10.83	-67.29	-67.76	-29.48	-13.94	4.89	-86.91
Harvest-period price (dollars/bu.)	3.50	2.52	2.24	3.70	2.94	2.45	1.74	1.77	3.08	2.60	2.51	2.55
Yield (bu./planted acre)	78.41	95.98	95.75	73.69	106.55	109.75	92.42	89.20	69.61	98.72	108.79	61.34

1/ Includes cost of technical services and commercial drying. 2/ Includes cost of purchased irrigated water.
Note: Survey base changed in 1986 and 1991.

Table 3A--Corn production cash costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	176.68	191.38	199.23	205.85	248.12	205.57	120.32	145.21	204.11	246.18	195.16	224.06
Total, gross value of production	176.68	191.38	199.23	205.85	248.12	205.57	120.32	145.21	204.11	246.18	195.16	224.06
Cash expenses:												
Seed	13.63	14.52	15.13	15.04	17.02	17.26	19.45	18.98	18.61	21.41	21.23	18.74
Fertilizer, lime, and gypsum	60.60	63.87	64.95	64.08	66.73	61.60	46.10	43.98	52.79	55.72	51.18	55.73
Chemicals	14.15	16.87	16.60	17.49	17.96	18.03	21.62	21.68	21.99	23.08	24.28	25.04
Custom operations 1/	7.91	10.04	10.54	10.12	10.88	8.54	5.75	5.92	6.46	6.35	6.72	3.77
Fuel, lube, and electricity	17.30	20.01	19.11	15.20	14.75	16.64	10.61	12.38	11.50	15.24	16.13	14.67
Repairs	7.85	9.66	10.16	9.50	10.79	10.61	8.88	9.54	9.68	11.88	10.86	16.17
Hired labor	3.60	3.94	3.98	3.92	4.21	4.36	10.01	9.77	9.64	10.15	10.77	16.47
Other variable cash expenses	0.00	0.12	0.18	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses 2/	125.04	139.03	140.65	135.53	142.52	137.22	122.42	122.25	130.67	143.83	141.17	150.59
General farm overhead	12.51	9.42	10.99	10.26	10.44	7.38	7.32	7.08	7.64	7.27	8.41	9.36
Taxes and insurance	6.32	6.54	6.68	6.68	7.47	7.80	7.99	8.42	8.45	9.08	8.61	11.75
Interest	29.78	28.75	41.48	32.99	34.20	22.43	11.50	8.78	8.33	8.25	9.10	8.64
Total, fixed cash expenses	48.61	44.71	59.15	49.93	52.11	37.61	26.81	24.28	24.42	24.60	26.12	29.75
Total, cash expenses	173.65	183.74	199.79	185.46	194.63	174.83	149.23	146.53	155.09	168.43	167.29	180.34
Gross value of production less cash expenses	3.03	7.64	-0.56	20.39	53.49	30.74	-28.91	-1.32	49.02	77.75	27.87	43.72
Harvest-period price (dollars/bu.)	3.39	2.62	2.14	3.67	2.79	2.34	1.66	1.79	2.87	2.44	2.43	2.51
Yield (bu./planted acre)	52.13	73.13	93.29	56.04	88.90	87.79	72.46	81.02	71.12	101.08	80.45	89.34

Table 3B--Corn production economic costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	176.68	191.38	199.23	205.85	248.12	205.57	120.32	145.21	204.11	246.18	195.16	224.06
Total, gross value of production	176.68	191.38	199.23	205.85	248.12	205.57	120.32	145.21	204.11	246.18	195.16	224.06
Economic (full ownership) costs:												
Variable cash expenses	125.04	139.03	140.64	135.53	142.52	137.22	122.42	122.25	130.67	143.83	141.17	150.59
General farm overhead	12.51	9.42	10.99	10.26	10.44	7.38	7.32	7.08	7.64	7.27	8.41	9.36
Taxes and insurance	6.32	6.54	6.68	6.68	7.47	7.80	7.99	8.42	8.45	9.08	8.61	11.75
Capital replacement	19.62	21.25	23.19	22.93	24.77	24.05	22.93	23.64	24.31	28.39	27.54	25.05
Operating capital	5.86	7.44	5.90	4.71	5.37	4.10	2.59	2.84	3.51	4.34	4.01	4.10
Other nonland capital	3.95	3.86	4.05	3.48	4.82	4.51	4.32	4.44	5.30	7.63	7.79	9.29
Land	36.40	39.52	36.70	33.48	42.84	35.43	23.33	26.41	34.31	43.45	32.75	44.69
Unpaid labor	10.23	11.20	11.31	11.16	11.98	12.41	18.60	19.36	21.43	21.30	22.49	19.59
Total, economic costs	219.93	238.26	239.46	228.23	250.21	232.90	209.50	214.44	235.62	265.29	252.77	274.42
Residual returns to management and risk	-43.25	-46.88	-40.24	-22.38	-2.09	-27.33	-89.18	-69.23	-31.51	-19.11	-57.61	-50.36
Harvest-period price (dollars/bu.)	3.39	2.62	2.14	3.67	2.79	2.34	1.66	1.79	2.87	2.44	2.43	2.51
Yield (bu./planted acre)	52.13	73.13	93.29	56.04	88.90	87.79	72.46	81.02	71.12	101.08	80.45	89.34

1/ Includes cost of technical services and commercial drying. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1986 and 1991.

Table 4A--Corn production cash costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	299.44	268.66	250.64	256.72	275.04	255.32	171.65	192.13	197.57	260.63	265.63	247.72
Total, gross value of production	299.44	268.66	250.64	256.72	275.04	255.32	171.65	192.13	197.57	260.63	265.63	247.72
Cash expenses:												
Seed	14.66	16.64	16.86	17.39	18.62	18.84	19.39	19.11	19.21	21.22	20.70	21.42
Fertilizer, lime, and gypsum	53.04	56.55	54.27	52.63	55.28	55.04	44.45	41.10	50.77	51.76	46.60	45.26
Chemicals	15.13	16.47	18.88	19.81	20.31	20.29	22.19	22.22	22.59	23.66	24.88	22.94
Custom operations 1/	4.31	4.76	7.37	7.25	7.47	7.56	5.42	5.43	4.47	5.76	6.05	8.80
Fuel, lube, and electricity	20.39	24.99	22.59	17.80	16.67	20.20	16.69	16.72	13.00	17.46	21.39	12.58
Repairs	8.63	10.15	9.57	8.76	9.75	9.64	6.64	6.68	6.27	7.16	7.61	12.15
Hired labor	3.10	3.57	3.44	3.07	3.41	3.59	6.93	6.90	6.90	7.21	7.64	5.99
Other variable cash expenses 2/	0.00	0.00	0.16	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	119.26	133.13	133.14	126.87	131.67	135.32	121.71	118.16	123.21	134.23	134.87	129.14
General farm overhead	16.46	15.38	16.82	14.28	14.61	10.49	11.53	11.26	11.94	11.56	13.37	9.65
Taxes and insurance	15.74	15.99	14.63	13.84	18.59	18.96	15.59	16.80	16.60	16.84	16.86	18.21
Interest	35.35	43.17	48.45	45.77	47.29	34.32	24.08	18.56	17.14	17.44	19.20	15.49
Total, fixed cash expenses	67.55	74.54	79.90	73.89	80.49	63.77	51.20	46.62	45.68	45.84	49.43	43.35
Total, cash expenses	186.81	207.67	213.04	200.76	212.16	199.09	172.91	164.78	168.89	180.07	184.30	172.49
Gross value of production less cash expenses	112.63	60.99	37.60	55.96	62.88	56.23	-1.26	27.35	28.68	80.56	81.33	75.23
Harvest-period price (dollars/bu.)	3.04	2.32	2.09	3.17	2.53	2.09	1.36	1.53	2.56	2.18	2.16	2.29
Yield (bu./planted acre)	98.50	115.68	120.06	81.02	108.65	121.96	126.25	125.69	77.19	119.47	122.71	108.22

Table 4B--Corn production economic costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	299.44	268.66	250.64	256.72	275.04	255.32	171.65	192.13	197.57	260.63	265.63	247.72
Total, gross value of production	299.44	268.66	250.64	256.72	275.04	255.32	171.65	192.13	197.57	260.63	265.63	247.72
Economic (full ownership) costs:												
Variable cash expenses	119.26	133.13	133.14	126.87	131.67	135.32	121.71	118.16	123.21	134.23	134.87	129.14
General farm overhead	16.46	15.38	16.82	14.28	14.61	10.49	11.53	11.26	11.94	11.56	13.37	9.65
Taxes and insurance	15.74	15.99	14.63	13.84	18.59	18.96	15.59	16.80	16.60	16.84	16.86	18.21
Capital replacement	22.02	25.04	34.01	34.11	34.18	34.87	30.55	30.83	31.41	34.72	36.67	22.57
Operating capital	5.65	7.44	6.05	4.76	5.44	4.34	2.54	2.76	3.45	4.20	3.82	3.51
Other nonland capital	4.71	4.87	5.98	5.18	6.80	6.55	5.26	5.21	5.95	8.00	9.22	8.75
Land	75.76	68.96	54.58	50.11	75.85	60.58	43.14	45.44	47.02	58.86	60.78	66.40
Unpaid labor	8.81	10.16	9.80	8.72	9.69	10.21	19.86	20.71	21.75	22.99	24.30	24.62
Total, economic costs	268.41	280.97	275.00	257.87	296.83	281.32	250.18	251.17	261.33	291.40	299.89	282.85
Residual returns to management and risk	31.03	-12.31	-24.36	-1.15	-21.79	-26.00	-78.53	-59.04	-63.76	-30.77	-34.26	-35.13
Harvest-period price (dollars/bu.)	3.04	2.32	2.09	3.17	2.53	2.09	1.36	1.53	2.56	2.18	2.16	2.29
Yield (bu./planted acre)	98.50	115.68	120.06	81.02	108.65	121.96	126.25	125.69	77.19	119.47	122.71	108.22

1/ Includes cost of technical services and commercial drying. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1986 and 1991.

Table 5A--Corn production cash costs and returns, Plains States, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	248.63	256.86	232.55	244.74	263.79	257.16	170.09	183.27	274.62	235.64	245.24	296.12
Total, gross value of production	248.63	256.86	232.55	244.74	263.79	257.16	170.09	183.27	274.62	235.64	245.24	296.12
Cash expenses:												
Seed	13.41	15.97	16.21	15.38	17.07	17.92	18.52	17.81	17.83	20.06	19.64	22.81
Fertilizer, lime, and gypsum	23.57	31.71	29.40	28.94	33.46	38.47	25.86	23.34	26.56	29.69	26.73	40.71
Chemicals	9.59	10.21	16.21	17.09	16.98	17.17	13.92	13.89	14.12	14.80	15.71	20.63
Custom operations 1/	3.68	4.08	5.61	5.71	5.58	5.85	5.50	5.57	5.43	6.07	6.23	11.51
Fuel, lube, and electricity	39.38	47.81	36.24	33.23	29.60	33.83	27.13	28.26	29.18	30.22	35.23	39.49
Repairs	17.88	21.30	15.19	15.75	15.74	15.83	11.82	11.89	12.49	12.95	13.36	16.52
Hired labor	4.06	4.65	4.57	4.52	4.84	5.04	9.56	9.51	9.86	10.71	10.70	8.85
Other variable cash expenses	0.36	0.41	1.63	1.63	1.65	1.64	1.14	1.11	1.15	1.14	1.14	1.76
Total, variable cash expenses 2/	111.93	136.14	125.05	122.25	124.93	135.75	113.45	111.38	116.62	125.64	128.74	162.28
General farm overhead	14.52	16.89	15.71	17.81	17.77	11.66	8.26	8.00	8.51	8.21	9.50	13.52
Taxes and insurance	15.52	16.37	14.92	15.39	16.63	17.38	9.75	10.02	10.06	10.02	10.14	18.33
Interest	28.42	45.31	46.93	51.12	48.22	31.14	16.21	12.20	11.12	11.44	12.53	24.25
Total, fixed cash expenses	58.46	78.57	77.56	84.32	82.62	60.18	34.22	30.22	29.69	29.67	32.17	56.10
Total, cash expenses	170.39	214.71	202.61	206.57	207.55	195.93	147.67	141.60	146.31	155.31	160.91	218.38
Gross value of production less cash expenses	78.24	42.15	29.94	38.17	56.24	61.23	22.42	41.67	128.31	80.33	84.33	77.74
Harvest-period price (dollars/bu.)	3.12	2.41	2.28	3.08	2.55	2.21	1.48	1.59	2.60	2.21	2.19	2.31
Yield (bu./planted acre)	79.58	106.66	102.12	79.40	103.59	116.53	114.64	115.23	105.48	106.57	112.13	128.01

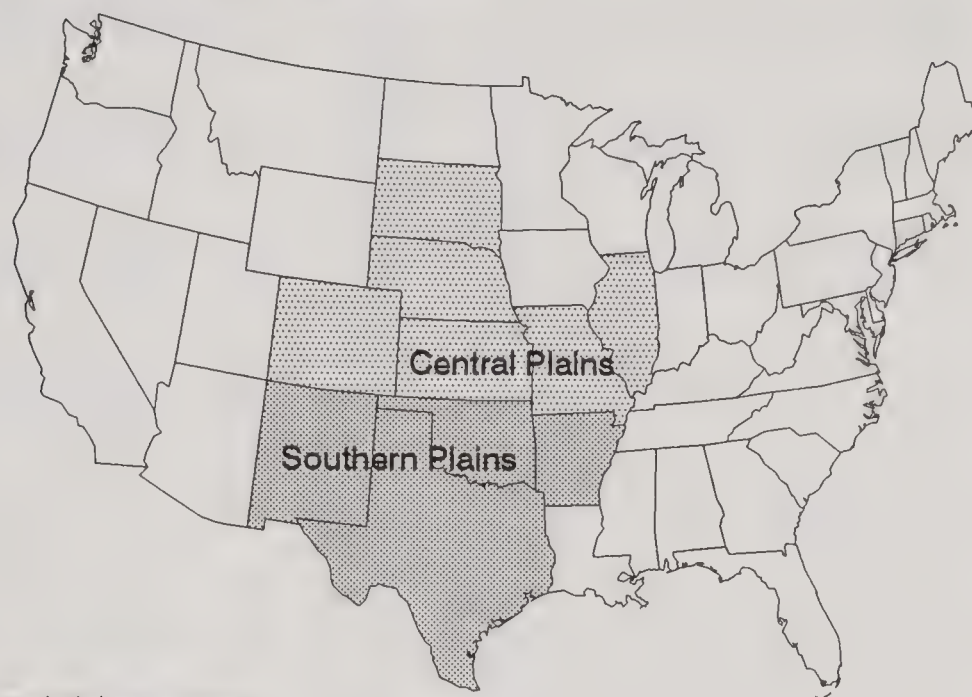
Table 5B--Corn production economic costs and returns, Plains States, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Corn	248.63	256.86	232.55	244.74	263.79	257.16	170.09	183.27	274.62	235.64	245.24	296.12
Total, gross value of production	248.63	256.86	232.55	244.74	263.79	257.16	170.09	183.27	274.62	235.64	245.24	296.12
Economic (full ownership) costs:												
Variable cash expenses	111.93	136.14	125.05	122.25	124.93	135.75	113.45	111.38	116.62	125.64	128.74	162.28
General farm overhead	14.52	16.89	15.71	17.81	17.77	11.66	8.26	8.00	8.51	8.21	9.50	13.52
Taxes and insurance	15.52	16.37	14.92	15.39	16.63	17.38	9.75	10.02	10.06	10.02	10.14	18.33
Capital replacement	41.53	45.70	36.38	38.09	37.27	39.73	29.20	29.46	30.92	32.81	34.17	43.02
Operating capital	4.97	7.11	5.85	4.59	5.26	4.47	2.41	2.64	3.20	4.02	3.69	4.41
Other nonland capital	8.54	8.92	6.62	6.18	7.84	7.75	5.52	5.47	6.59	8.40	9.59	14.82
Land	53.86	50.48	49.44	49.73	56.25	47.69	44.02	49.41	77.94	61.18	66.84	55.36
Unpaid labor	11.54	13.25	13.00	12.86	13.77	14.34	19.15	17.70	19.05	20.36	20.65	20.20
Total, economic costs	262.41	294.86	266.98	266.90	279.72	278.77	231.76	234.08	272.89	270.64	283.32	331.94
Residual returns to management and risk	-13.78	-38.00	-34.43	-22.16	-15.93	-21.61	-61.67	-50.81	1.73	-35.00	-38.08	-35.82
Harvest-period price (dollars/bu.)	3.12	2.41	2.28	3.08	2.55	2.21	1.48	1.59	2.60	2.21	2.19	2.31
Yield (bu./planted acre)	79.58	106.66	102.12	79.40	103.59	116.53	114.64	115.23	105.48	106.57	112.13	128.01

1/ Includes cost of technical services and commercial drying. 2/ Includes cost of purchased irrigated water.
Note: Survey base changed in 1986 and 1991.

Figure 7

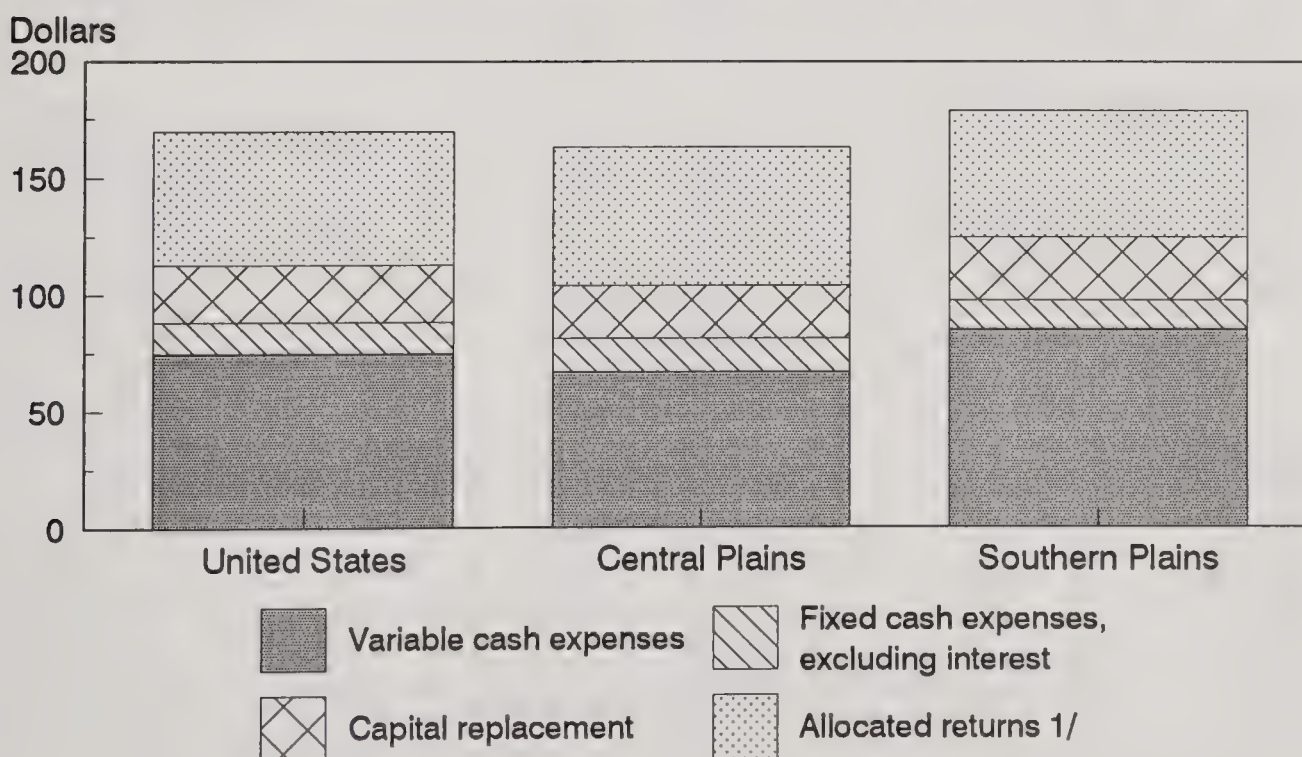
Sorghum Production Regions



Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Figure 8

Sorghum production economic costs per planted acre, 1991



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to sorghum production rather than some other income-producing use.

Table 6A--U.S. grain sorghum production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	131.17	141.50	121.36	131.58	123.73	124.99	91.57	96.18	141.59	105.24	117.30	124.99
Total, gross value of production	131.17	141.50	121.36	131.58	123.73	124.99	91.57	96.18	141.59	105.24	117.30	124.99
Cash expenses:												
Seed	2.74	3.18	3.70	3.89	3.76	3.81	3.80	4.74	3.59	5.22	5.43	5.52
Fertilizer	15.62	18.64	20.15	19.12	20.49	20.34	17.65	15.33	17.19	20.15	17.71	18.42
Chemicals	6.70	7.26	8.64	9.26	9.41	9.71	9.73	9.87	10.22	9.61	10.11	10.97
Custom operations 1/	2.93	3.63	4.12	3.92	3.71	3.96	4.00	4.02	3.95	4.19	4.34	4.46
Fuel, lube, and electricity	17.30	20.05	19.12	17.08	14.80	14.52	10.03	11.23	11.01	13.57	14.80	15.51
Repairs	10.52	11.76	10.05	10.30	9.58	7.75	7.62	7.72	7.95	10.79	10.71	11.54
Hired labor	2.36	2.67	2.73	2.63	2.53	2.39	2.54	2.47	2.49	7.42	7.45	7.84
Other variable cash expenses 2/	0.09	0.25	0.65	0.56	0.58	0.13	0.13	0.11	0.10	0.38	0.39	0.41
Total, variable cash expenses	58.26	67.44	69.16	66.76	64.87	62.61	55.50	55.49	56.50	71.33	70.94	74.67
General farm overhead	7.71	9.13	8.11	7.65	7.68	5.67	6.01	6.83	9.40	6.32	5.28	4.64
Taxes and insurance	8.03	8.47	7.45	7.82	8.34	7.51	7.92	8.32	8.72	13.15	10.02	8.90
Interest	14.48	23.34	22.19	20.76	19.94	13.71	11.46	11.32	12.99	8.09	8.79	8.10
Total, fixed cash expenses	30.22	40.94	37.75	36.23	35.96	26.89	25.39	26.47	31.11	27.56	24.09	21.64
Total, cash expenses	88.48	108.38	106.91	102.99	100.83	89.50	80.89	81.96	87.61	98.89	95.03	96.31
Gross value of production less cash expenses	42.69	33.12	14.45	28.59	22.90	35.49	10.68	14.22	53.98	6.35	22.27	28.68
Harvest-period price (dollars/bu.)	3.04	2.25	2.11	2.84	2.34	1.90	1.37	1.40	2.36	2.07	2.07	2.27
Yield (bu./planted acre)	43.16	62.95	57.64	46.29	52.81	65.89	66.91	68.62	60.07	50.84	56.76	55.02

Table 6B--U.S. grain sorghum production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	131.17	141.50	121.36	131.58	123.73	124.99	91.57	96.18	141.59	105.24	117.30	124.99
Total, gross value of production	131.17	141.50	121.36	131.58	123.73	124.99	91.57	96.18	141.59	105.24	117.30	124.99
Economic (full ownership) costs:												
Variable cash expenses	58.26	67.44	69.16	66.76	64.87	62.61	55.50	55.49	56.50	71.33	70.94	74.67
General farm overhead	7.71	9.13	8.11	7.65	7.68	5.67	6.01	6.83	9.40	6.32	5.28	4.64
Taxes and insurance	8.03	8.47	7.45	7.82	8.34	7.51	7.92	8.32	8.72	13.15	10.02	8.90
Capital replacement	25.67	27.26	23.87	26.74	23.93	22.56	23.04	23.13	24.46	22.77	22.75	24.51
Operating capital	2.38	3.33	2.90	2.29	2.42	2.17	1.32	1.47	1.73	2.87	2.65	2.03
Other nonland capital	5.15	4.99	4.10	4.04	4.73	4.11	4.19	4.18	5.10	15.45	9.86	11.85
Land	28.61	31.51	28.23	31.18	28.86	33.79	25.51	26.47	37.20	27.46	25.55	25.70
Unpaid labor	9.46	10.69	10.92	10.52	10.14	9.56	10.17	9.88	9.98	16.95	17.10	17.55
Total, economic costs	145.27	162.82	154.74	157.00	150.97	147.98	133.66	135.77	153.09	176.30	164.15	169.85
Residual returns to management and risk	-14.10	-21.32	-33.38	-25.42	-27.24	-22.99	-42.09	-39.59	-11.50	-71.06	-46.85	-44.86
Harvest-period price (dollars/bu.)	3.04	2.25	2.11	2.84	2.34	1.90	1.37	1.40	2.36	2.07	2.07	2.27
Yield (bu./planted acre)	43.16	62.95	57.64	46.29	52.81	65.89	66.91	68.62	60.07	50.84	56.76	55.02

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1985 and 1990.

Table 6C--U.S. grain sorghum production cash costs and returns,
including direct Government payments and program
participation costs, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	117.30	124.99
Direct Government payments	25.83	22.00
Total, gross value of production	143.13	146.99
Cash expenses:		
Seed	5.43	5.52
Fertilizer	17.71	18.42
Chemicals	10.43	11.31
Custom operations 1/	4.34	4.46
Fuel, lube, and electricity	16.06	16.96
Repairs	11.52	12.57
Hired labor	8.06	8.48
Other variable cash expenses 2/	0.67	0.81
Total, variable cash expenses	74.22	78.53
General farm overhead	5.64	4.91
Taxes and insurance	10.61	9.36
Interest	9.39	8.61
Total, fixed cash expenses	25.64	22.88
Total, cash expenses	99.86	101.41
Gross value of production less cash expenses	43.27	45.58
Harvest-period price (dollars/bu.)	2.07	2.27
Yield (bu./planted acre)	56.76	55.02

Table 6D--U.S. grain sorghum production economic costs and returns,
including direct Government payments and program
participation costs, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	117.30	124.99
Direct Government payments	25.83	22.00
Total, gross value of production	143.13	146.99
Economic (full ownership) costs:		
Variable cash expenses	74.22	78.53
General farm overhead	5.64	4.91
Taxes and insurance	10.61	9.36
Capital replacement	24.58	26.90
Operating capital	2.85	2.17
Other nonland capital	10.62	13.09
Land	27.30	27.47
Unpaid labor	18.25	18.74
Total, economic costs	174.07	181.17
Residual returns to management and risk	-30.94	-34.18
Harvest-period price (dollars/bu.)	2.07	2.27
Yield (bu./planted acre)	56.76	55.02

1/ Includes cost of technical services. 2/ Includes cost of
purchased irrigation water and cover crop seed.

Table 7A--Grain sorghum production cash costs and returns, Central Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	131.23	141.56	126.18	127.27	120.36	126.18	94.60	98.65	139.05	104.39	125.59	122.75
Total, gross value of production	131.23	141.56	126.18	127.27	120.36	126.18	94.60	98.65	139.05	104.39	125.59	122.75
Cash expenses:												
Seed	2.52	2.83	3.27	3.50	3.55	3.52	3.55	3.78	3.39	4.90	5.06	5.02
Fertilizer	16.51	17.57	20.85	19.04	21.79	20.64	18.02	15.71	17.46	19.63	17.47	18.02
Chemicals	6.93	7.53	9.87	10.26	10.46	11.76	11.80	11.67	11.94	11.09	11.67	12.62
Custom operations 1/	1.96	2.20	2.85	2.81	2.74	2.93	2.93	3.04	3.04	3.08	3.17	3.15
Fuel, lube, and electricity	14.17	18.96	16.13	14.79	12.14	11.28	8.02	9.11	8.67	10.29	11.84	11.65
Repairs	10.20	12.97	9.34	9.56	9.03	7.18	7.09	7.25	7.33	10.31	10.38	10.67
Hired labor	2.04	2.42	2.28	2.27	2.27	1.91	2.04	1.96	2.03	5.36	5.28	5.73
Other variable cash expenses 2/	0.00	0.00	0.25	0.22	0.23	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Total, variable cash expenses	54.33	64.48	64.85	62.45	62.21	59.22	53.45	52.52	53.86	64.67	64.88	66.87
General farm overhead	7.37	8.75	8.77	7.76	7.75	5.25	4.86	7.30	9.58	6.25	5.30	4.64
Taxes and insurance	9.32	10.56	9.40	9.53	9.82	8.58	9.03	9.31	9.60	14.23	11.00	9.75
Interest	14.43	23.27	26.46	23.03	21.96	14.81	10.70	12.13	13.52	9.48	10.31	9.55
Total, fixed cash expenses	31.12	42.58	44.63	40.32	39.53	28.64	24.59	28.74	32.70	29.96	26.61	23.94
Total, cash expenses	85.45	107.06	109.48	102.77	101.74	87.86	78.04	81.26	86.56	94.63	91.49	90.81
Gross value of production less cash expenses	45.78	34.50	16.70	24.50	18.62	38.32	16.56	17.39	52.49	9.76	34.10	31.94
Harvest-period price (dollars/bu.)	2.91	2.12	2.02	2.78	2.22	1.80	1.26	1.36	2.29	1.98	1.93	2.18
Yield (bu./planted acre)	45.03	66.65	62.59	45.73	54.29	70.21	75.28	72.69	60.68	52.72	64.98	56.32

Table 7B--Grain sorghum production economic costs and returns, Central Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	131.23	141.56	126.18	127.27	120.36	126.18	94.60	98.65	139.05	104.39	125.59	122.75
Total, gross value of production	131.23	141.56	126.18	127.27	120.36	126.18	94.60	98.65	139.05	104.39	125.59	122.75
Economic (full ownership) costs:												
Variable cash expenses	54.33	64.48	64.85	62.45	62.21	59.22	53.45	52.52	53.86	64.67	64.88	66.87
General farm overhead	7.37	8.75	8.77	7.76	7.75	5.25	4.86	7.30	9.58	6.25	5.30	4.64
Taxes and insurance	9.32	10.56	9.40	9.53	9.82	8.58	9.03	9.31	9.60	14.23	11.00	9.75
Capital replacement	26.19	31.00	24.17	28.20	24.14	21.93	22.68	22.70	22.98	21.48	21.88	22.54
Operating capital	2.25	3.06	2.75	2.23	2.37	2.12	1.31	1.43	1.71	2.60	2.42	1.82
Other nonland capital	5.35	5.94	4.43	4.42	4.98	4.17	4.30	4.25	4.96	16.09	9.99	11.51
Land	31.13	31.13	29.16	30.24	27.89	34.40	26.32	27.14	36.67	30.74	28.07	26.21
Unpaid labor	8.18	9.66	9.14	9.07	9.10	7.63	8.17	7.84	8.14	18.92	19.25	19.76
Total, economic costs	144.12	164.58	152.67	153.90	148.26	143.30	130.12	132.49	147.50	174.98	162.79	163.10
Residual returns to management and risk	-12.89	-23.02	-26.49	-26.63	-27.90	-17.12	-35.52	-33.84	-8.45	-70.59	-37.20	-40.35
Harvest-period price (dollars/bu.)	2.91	2.12	2.02	2.78	2.22	1.80	1.26	1.36	2.29	1.98	1.93	2.18
Yield (bu./planted acre)	45.03	66.65	62.59	45.73	54.29	70.21	75.28	72.69	60.68	52.72	64.98	56.32

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1985 and 1990.

Table 7C--Grain sorghum production cash costs and returns,
including direct Government payments and program
participation costs, Central Plains, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	125.59	122.75
Direct Government payments	28.43	22.45
Total, gross value of production	154.02	145.20
Cash expenses:		
Seed	5.06	5.02
Fertilizer	17.47	18.02
Chemicals	11.92	12.87
Custom operations 1/	3.17	3.15
Fuel, lube, and electricity	12.27	12.05
Repairs	10.78	11.09
Hired labor	5.46	5.92
Other variable cash expenses 2/	0.31	0.45
Total, variable cash expenses	66.44	68.57
General farm overhead	5.51	4.80
Taxes and insurance	11.42	10.06
Interest	10.65	9.83
Total, fixed cash expenses	27.58	24.69
Total, cash expenses	94.02	93.26
Gross value of production less cash expenses	60.00	51.94
Harvest-period price (dollars/bu.)	1.93	2.18
Yield (bu./planted acre)	64.98	56.32

Table 7D--Grain sorghum production economic costs and returns,
including direct Government payments and program
participation costs, Central Plains, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	125.59	122.75
Direct Government payments	28.43	22.45
Total, gross value of production	154.02	145.20
Economic (full ownership) costs:		
Variable cash expenses	66.44	68.57
General farm overhead	5.51	4.80
Taxes and insurance	11.42	10.06
Capital replacement	22.70	23.42
Operating capital	2.51	1.88
Other nonland capital	10.37	12.03
Land	29.17	27.18
Unpaid labor	20.01	20.52
Total, economic costs	168.13	168.46
Residual returns to management and risk	-14.11	-23.26
Harvest-period price (dollars/bu.)	1.93	2.18
Yield (bu./planted acre)	64.98	56.32

1/ Includes cost of technical services. 2/ Includes cost of
purchased irrigation water and cover crop seed.

Table 8A--Grain sorghum production cash costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	126.81	139.64	115.87	135.47	128.49	123.15	86.95	91.48	147.03	105.25	106.11	127.99
Total, gross value of production	126.81	139.64	115.87	135.47	128.49	123.15	86.95	91.48	147.03	105.25	106.11	127.99
Cash expenses:												
Seed	2.87	3.49	4.06	4.30	4.05	4.24	4.18	6.58	4.00	5.67	5.93	6.18
Fertilizer	13.66	19.77	19.30	19.12	18.06	19.88	17.07	14.62	16.60	20.87	18.04	18.95
Chemicals	6.30	6.81	7.37	7.91	7.54	6.52	6.58	6.45	6.54	7.57	8.00	8.77
Custom operations 1/	4.02	5.24	5.26	5.16	5.25	5.58	5.62	5.87	5.86	5.71	5.93	6.20
Fuel, lube, and electricity	21.20	21.93	21.93	19.79	19.31	19.56	13.08	15.29	16.02	18.12	18.79	20.65
Repairs	10.93	10.03	10.72	11.19	10.48	8.64	8.42	8.61	9.29	11.46	11.17	12.69
Hired labor	2.70	2.90	3.12	3.03	2.93	3.14	3.30	3.44	3.48	10.28	10.38	10.65
Other variable cash expenses 2/	0.00	0.43	1.07	0.92	0.96	0.35	0.34	0.34	0.34	0.88	0.90	0.93
Total, variable cash expenses	61.68	69.67	72.84	71.42	68.59	67.91	58.59	61.20	62.13	80.56	79.14	85.02
General farm overhead	7.92	9.48	7.31	7.37	7.41	6.32	7.78	5.92	9.02	6.43	5.26	4.63
Taxes and insurance	5.82	5.33	5.38	5.53	5.66	5.86	6.21	6.43	6.88	11.65	8.69	7.78
Interest	13.77	23.05	17.78	17.58	16.17	11.99	12.64	9.77	11.83	6.16	6.74	6.18
Total, fixed cash expenses	27.51	37.86	30.47	30.48	29.24	24.17	26.63	22.12	27.73	24.24	20.69	18.59
Total, cash expenses	89.19	107.53	103.31	101.90	97.83	92.08	85.22	83.32	89.86	104.80	99.83	103.61
Gross value of production less cash expenses	37.62	32.11	12.56	33.57	30.66	31.07	1.73	8.16	57.17	0.45	6.28	24.38
Harvest-period price (dollars/bu.)	3.20	2.42	2.21	2.90	2.57	2.08	1.61	1.50	2.50	2.20	2.32	2.40
Yield (bu./planted acre)	39.60	57.60	52.47	46.65	49.94	59.17	54.15	60.87	58.76	47.84	45.67	53.28

Table 8B--Grain sorghum production economic costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Sorghum	126.81	139.64	115.87	135.47	128.49	123.15	86.95	91.48	147.03	105.25	106.11	127.99
Total, gross value of production	126.81	139.64	115.87	135.47	128.49	123.15	86.95	91.48	147.03	105.25	106.11	127.99
Economic (full ownership) costs:												
Variable cash expenses	61.68	69.67	72.84	71.42	68.59	67.91	58.59	61.20	62.13	80.56	79.14	85.02
General farm overhead	7.92	9.48	7.31	7.37	7.41	6.32	7.78	5.92	9.02	6.43	5.26	4.63
Taxes and insurance	5.82	5.33	5.38	5.53	5.66	5.86	6.21	6.43	6.88	11.65	8.69	7.78
Capital replacement	24.84	21.98	23.44	24.72	23.40	23.54	23.60	23.95	27.61	24.56	23.92	27.15
Operating capital	2.46	3.60	3.02	2.33	2.48	2.24	1.33	1.54	1.77	3.24	2.95	2.32
Other nonland capital	4.85	3.67	3.74	3.53	4.26	4.01	4.03	4.05	5.38	14.56	9.69	12.31
Land	24.59	31.87	26.99	31.94	30.18	32.85	24.29	25.19	38.34	22.92	22.15	25.03
Unpaid labor	10.79	11.60	12.50	12.14	11.74	12.54	13.21	13.78	13.91	14.21	14.20	14.62
Total, economic costs	142.95	157.20	155.21	158.98	153.71	155.27	139.04	142.06	164.99	178.13	166.00	178.86
Residual returns to management and risk	-16.14	-17.56	-39.34	-23.51	-25.22	-32.12	-52.09	-50.58	-17.96	-72.88	-59.89	-50.87
Harvest-period price (dollars/bu.)	3.20	2.42	2.21	2.90	2.57	2.08	1.61	1.50	2.50	2.20	2.32	2.40
Yield (bu./planted acre)	39.60	57.60	52.47	46.65	49.94	59.17	54.15	60.87	58.76	47.84	45.67	53.28

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1985 and 1990.

Table 8C--Grain sorghum production cash costs and returns,
including direct Government payments and program
participation costs, Southern Plains, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	106.11	127.99
Direct Government payments	22.31	21.39
Total, gross value of production	128.42	149.38
Cash expenses:		
Seed	5.93	6.18
Fertilizer	18.04	18.95
Chemicals	8.41	9.23
Custom operations 1/	5.93	6.20
Fuel, lube, and electricity	21.18	23.51
Repairs	12.53	14.55
Hired labor	11.57	11.90
Other variable cash expenses 2/	1.15	1.28
Total, variable cash expenses	84.74	91.80
General farm overhead	5.83	5.06
Taxes and insurance	9.52	8.42
Interest	7.69	6.98
Total, fixed cash expenses	23.04	20.46
Total, cash expenses	107.78	112.26
Gross value of production less cash expenses	20.64	37.12
Harvest-period price (dollars/bu.)	2.32	2.40
Yield (bu./planted acre)	45.67	53.28

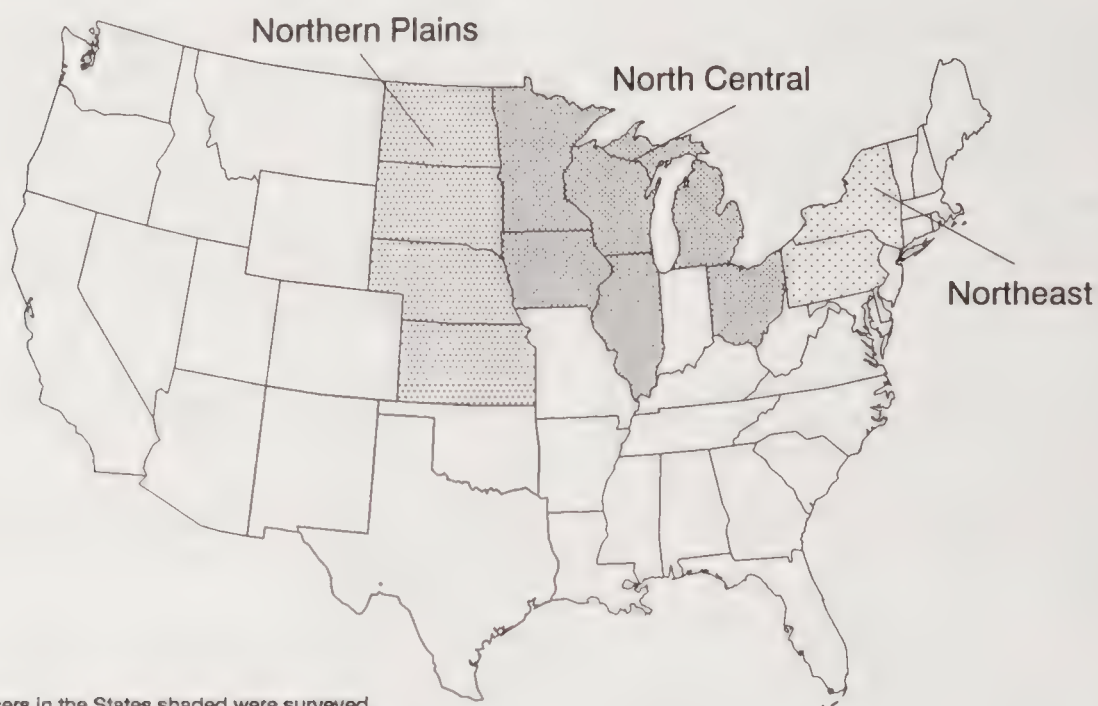
Table 8D--Grain sorghum production economic costs and returns,
including direct Government payments and program
participation costs, Southern Plains, 1990-91

Item	1990	1991
Dollars per planted acre		
Gross value of production (including direct Government payments):		
Market value of sorghum	106.11	127.99
Direct Government payments	22.31	21.39
Total, gross value of production	128.42	149.38
Economic (full ownership) costs:		
Variable cash expenses	84.74	91.80
General farm overhead	5.83	5.06
Taxes and insurance	9.52	8.42
Capital replacement	27.13	31.54
Operating capital	3.31	2.57
Other nonland capital	10.97	14.51
Land	24.79	27.86
Unpaid labor	15.88	16.37
Total, economic costs	182.17	198.13
Residual returns to management and risk	-53.75	-48.75
Harvest-period price (dollars/bu.)	2.32	2.40
Yield (bu./planted acre)	45.67	53.28

1/ Includes cost of technical services. 2/ Includes cost of
purchased irrigation water and cover crop seed.

Figure 9

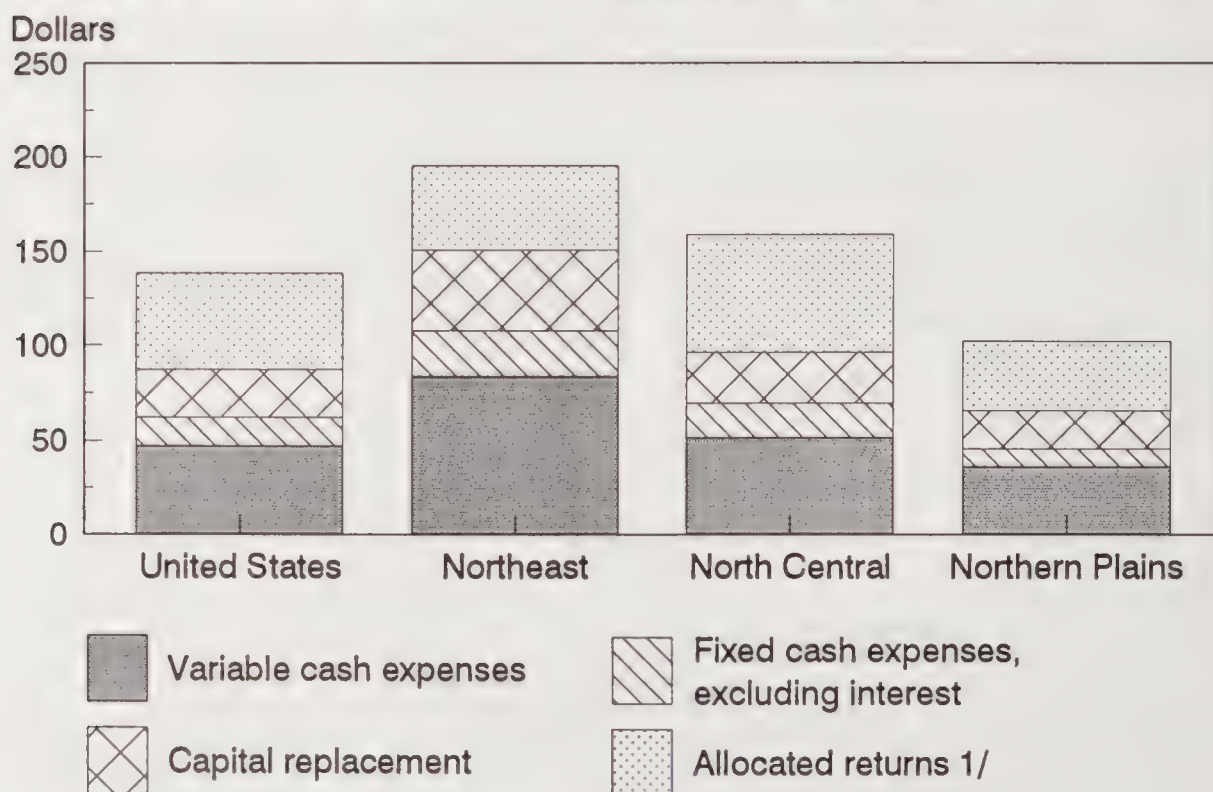
Oats Production Regions



Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Figure 10

Oats production economic costs per planted acre, 1991



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to oats production rather than some other income-producing use.

Table 9A--U.S. oats production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	74.28	91.15	78.33	70.82	83.96	55.61	48.68	70.54	94.38	81.69	66.88	60.82
Oats straw	27.24	30.22	25.44	23.78	20.78	23.82	20.26	10.73	17.74	15.63	14.02	15.56
Total, gross value of production	101.52	121.37	103.77	94.60	104.74	79.43	68.94	81.27	112.12	97.32	80.90	76.38
Cash expenses:												
Seed	5.63	7.13	7.15	5.71	8.82	8.47	5.49	6.77	8.38	9.56	8.58	7.58
Fertilizer, lime, and gypsum	10.34	10.36	12.52	11.22	12.23	11.43	10.93	12.94	14.86	13.82	12.55	12.40
Chemicals	0.87	0.95	1.25	1.34	1.38	1.23	1.35	1.01	1.06	1.10	1.10	1.05
Custom operations 1/	3.49	3.75	4.27	4.10	4.16	3.07	2.55	4.39	4.55	6.39	6.96	5.90
Fuel, lube, and electricity	10.34	11.70	11.89	10.53	8.80	8.76	6.78	5.60	5.66	6.81	7.60	8.25
Repairs	6.79	7.71	7.59	7.86	7.54	6.42	7.59	5.28	5.63	6.78	6.90	7.36
Hired labor	1.40	1.53	1.61	1.55	1.63	1.51	1.89	3.81	4.10	4.54	4.95	4.89
Other variable cash expenses 2/	1.24	1.22	0.96	0.96	0.98	0.97	0.61	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	40.10	44.35	47.23	43.27	45.54	41.85	37.19	39.80	44.24	49.00	48.64	47.43
General farm overhead	5.73	6.57	4.67	5.18	5.32	3.90	4.67	3.32	3.33	3.13	3.64	3.11
Taxes and insurance	10.57	10.65	12.21	12.35	13.58	13.53	15.88	12.35	12.72	13.23	13.51	11.92
Interest	11.20	17.82	13.17	14.07	14.66	11.69	9.24	4.30	3.35	3.44	3.74	3.41
Total, fixed cash expenses	27.50	35.04	30.05	31.60	33.56	29.12	29.79	19.97	19.40	19.80	20.89	18.44
Total, cash expenses	67.60	79.39	77.28	74.87	79.10	70.97	66.98	59.77	63.64	68.80	69.53	65.87
Gross value of production less cash expenses	33.92	41.98	26.49	19.73	25.64	8.46	1.96	21.50	48.48	28.52	11.37	10.51
Harvest-period price (dollars/bu.)	1.49	1.73	1.42	1.45	1.65	1.23	0.86	1.31	2.66	1.52	1.09	1.22
Yield (bu./planted acre)	49.92	52.84	55.25	48.92	50.82	45.14	56.78	53.95	35.54	53.74	61.16	50.02

Table 9B--U.S. oats production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	74.28	91.15	78.33	70.82	83.96	55.61	48.68	70.54	94.38	81.69	66.88	60.82
Oats straw	27.24	30.22	25.44	23.78	20.78	23.82	20.26	10.73	17.74	15.63	14.02	15.56
Total, gross value of production	101.52	121.37	103.77	94.60	104.74	79.43	68.94	81.27	112.12	97.32	80.90	76.38
Economic (full ownership) costs:												
Variable cash expenses	40.10	44.35	47.23	43.27	45.54	41.85	37.19	39.80	44.24	49.00	48.64	47.43
General farm overhead	5.73	6.57	4.67	5.18	5.32	3.90	4.67	3.32	3.33	3.13	3.64	3.11
Taxes and insurance	10.57	10.65	12.21	12.35	13.58	13.53	15.88	12.35	12.72	13.23	13.51	11.92
Capital replacement	16.60	18.39	22.05	22.98	23.42	19.17	27.45	19.65	21.12	24.93	24.30	25.09
Operating capital	1.21	1.60	1.40	1.03	1.23	0.94	0.60	0.66	0.83	0.95	0.88	0.63
Nonland capital	3.45	3.47	4.48	4.18	5.33	4.15	5.98	3.72	4.66	6.95	7.48	8.66
Land	19.39	23.52	26.82	24.25	26.35	17.46	14.63	20.99	28.24	26.16	23.85	24.88
Unpaid labor	10.23	11.21	11.79	11.37	11.93	11.03	13.87	14.23	14.92	15.67	16.36	16.80
Total, economic costs	107.28	119.76	130.66	124.61	132.70	112.04	120.27	114.72	130.06	140.02	138.66	138.52
Residual returns to management and risk	-5.76	1.61	-26.89	-30.01	-27.96	-32.61	-51.33	-33.45	-17.94	-42.70	-57.76	-62.14
Harvest-period price (dollars/bu.)	1.49	1.73	1.42	1.45	1.65	1.23	0.86	1.31	2.66	1.52	1.09	1.22
Yield (bu./planted acre)	49.92	52.84	55.25	48.92	50.82	45.14	56.78	53.95	35.54	53.74	61.16	50.02

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1988.

Table 10A--Oats production cash costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	98.99	103.64	92.44	86.17	106.09	85.76	53.42	73.91	115.79	79.27	79.56	67.30
Oats straw	43.45	62.94	37.78	37.91	41.34	32.67	38.43	33.10	37.16	34.92	38.62	43.26
Total, gross value of production	142.44	166.58	130.22	124.08	147.43	118.43	91.85	107.01	152.95	114.19	118.18	110.56
Cash expenses:												
Seed	6.90	9.25	8.70	7.29	12.47	12.61	7.63	11.04	12.95	13.55	14.17	13.75
Fertilizer, lime, and gypsum	22.18	23.20	32.04	29.60	31.16	30.09	27.45	31.60	34.96	34.48	31.86	33.70
Chemicals	3.06	3.32	3.06	3.13	3.17	3.29	3.20	2.52	2.46	2.61	2.70	2.89
Custom operations 1/	6.91	7.35	5.68	5.72	5.68	5.99	5.50	4.44	4.13	4.53	5.15	4.89
Fuel, lube, and electricity	12.86	15.39	14.79	13.52	11.70	12.62	8.98	8.79	8.92	10.90	12.32	13.31
Repairs	7.68	8.65	9.79	10.08	9.81	9.74	9.69	9.67	10.34	10.44	10.37	10.59
Hired labor	1.97	2.14	2.20	2.22	2.18	2.26	2.59	3.87	4.45	4.64	4.77	4.99
Other variable cash expenses 2/	1.75	1.80	1.34	1.34	1.36	1.35	1.25	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	63.31	71.10	77.60	72.90	77.53	77.95	66.29	71.93	78.21	81.15	81.34	84.12
General farm overhead	15.09	9.82	5.56	9.57	9.75	9.07	13.71	8.52	8.55	8.29	9.61	8.40
Taxes and insurance	11.77	13.19	16.47	17.04	17.55	18.71	21.38	16.01	15.66	16.60	17.19	15.34
Interest	21.77	15.25	15.63	12.01	14.43	15.19	11.71	4.18	4.39	4.47	4.95	4.55
Total, fixed cash expenses	48.63	38.26	37.66	38.62	41.73	42.97	46.80	28.71	28.60	29.36	31.75	28.29
Total, cash expenses	111.94	109.36	115.26	111.52	119.26	120.92	113.09	100.64	106.81	110.51	113.09	112.41
Gross value of production less cash expenses	30.50	57.22	14.96	12.56	28.17	-2.49	-21.24	6.37	46.14	3.68	5.09	-1.85
Harvest-period price (dollars/bu.)	1.72	1.76	1.53	1.60	1.96	1.12	0.83	1.27	2.28	1.42	1.24	1.55
Yield (bu./planted acre)	57.68	59.01	60.51	53.74	54.24	76.89	64.53	58.23	50.72	55.89	64.20	43.42

Table 10B--Oats production economic costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	98.99	103.64	92.44	86.17	106.09	85.76	53.42	73.91	115.79	79.27	79.56	67.30
Oats straw	43.45	62.94	37.78	37.91	41.34	32.67	38.43	33.10	37.16	34.92	38.62	43.26
Total, gross value of production	142.44	166.58	130.22	124.08	147.43	118.43	91.85	107.01	152.95	114.19	118.18	110.56
Economic (full ownership) costs:												
Variable cash expenses	63.31	71.10	77.60	72.90	77.53	77.95	66.29	71.93	78.21	81.15	81.34	84.12
General farm overhead	15.09	9.82	5.56	9.57	9.75	9.07	13.71	8.52	8.55	8.29	9.61	8.40
Taxes and insurance	11.77	13.19	16.47	17.04	17.55	18.71	21.38	16.01	15.66	16.60	17.19	15.34
Capital replacement	18.13	19.83	28.78	30.07	31.31	31.61	37.59	32.69	34.33	41.20	41.17	43.01
Operating capital	2.10	2.83	2.50	1.89	2.25	1.76	1.09	1.31	1.69	1.99	1.84	1.34
Other nonland capital	3.84	3.83	6.28	5.92	7.45	7.09	8.52	5.76	7.05	10.36	11.21	13.07
Land	10.48	10.82	11.55	11.04	12.03	8.76	6.61	9.47	11.71	12.52	9.51	9.74
Unpaid labor	14.48	15.70	16.14	16.25	15.94	16.54	19.02	15.06	18.18	18.70	19.36	20.27
Total, economic costs	139.20	147.12	164.88	164.68	173.81	171.48	174.21	160.75	175.38	190.81	191.23	195.29
Residual returns to management and risk	3.24	19.46	-34.66	-40.60	-26.38	-53.05	-82.36	-53.74	-22.43	-76.62	-73.05	-84.73
Harvest-period price (dollars/bu.)	1.72	1.76	1.53	1.60	1.96	1.12	0.83	1.27	2.28	1.42	1.24	1.55
Yield (bu./planted acre)	57.68	59.01	60.51	53.74	54.24	76.89	64.53	58.23	50.72	55.89	64.20	43.42

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1988.

Table 11A--Oats production cash costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	84.63	103.47	79.99	80.06	93.19	60.68	52.52	75.93	106.26	101.11	73.04	59.09
Oats straw	31.32	33.23	39.08	38.70	30.02	34.36	28.25	13.37	22.89	20.52	17.46	21.72
Total, gross value of production	115.95	136.70	119.07	118.76	123.21	95.04	80.77	89.30	129.15	121.63	90.50	80.81
Cash expenses:												
Seed	6.14	7.54	7.75	6.37	10.26	9.65	6.20	7.55	9.14	10.72	9.30	8.28
Fertilizer, lime, and gypsum	12.06	12.63	13.94	12.80	13.76	12.31	11.97	15.01	16.77	15.43	14.17	13.82
Chemicals	0.73	0.80	1.25	1.39	1.49	1.17	1.39	0.88	0.91	0.94	0.97	0.84
Custom operations 1/	3.32	3.55	5.40	5.56	5.23	3.83	3.06	5.67	5.60	6.17	9.21	7.41
Fuel, lube, and electricity	12.15	13.70	13.52	12.34	10.11	9.91	7.85	6.38	6.25	7.29	8.02	8.62
Repairs	7.56	8.39	7.59	8.12	7.58	6.52	7.78	5.05	5.29	6.30	6.22	6.44
Hired labor	1.63	1.79	1.93	1.88	1.94	1.76	2.22	4.98	5.00	5.02	5.83	6.09
Other variable cash expenses	1.55	1.54	1.34	1.34	1.36	1.35	0.71	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses 2/	45.14	49.94	52.72	49.80	51.73	46.50	41.18	45.52	48.96	51.87	53.72	51.50
General farm overhead	5.76	7.46	5.15	5.48	5.61	4.52	4.93	3.22	3.24	3.15	3.71	3.24
Taxes and insurance	13.03	13.02	15.47	16.48	17.90	17.25	20.17	16.18	16.02	16.58	16.97	15.14
Interest	12.36	22.08	13.93	16.05	17.14	15.30	11.71	3.66	3.66	3.78	4.17	3.83
Total, fixed cash expenses	31.15	42.56	34.55	38.01	40.65	37.07	36.81	23.06	22.92	23.51	24.85	22.21
Total, cash expenses	76.29	92.50	87.27	87.81	92.38	83.57	77.99	68.58	71.88	75.38	78.57	73.71
Gross value of production less cash expenses	39.66	44.20	31.80	30.95	30.83	11.47	2.78	20.72	57.27	46.25	11.93	7.10
Harvest-period price (dollars/bu.)	1.46	1.72	1.45	1.52	1.69	1.32	0.87	1.31	2.73	1.55	1.10	1.21
Yield (bu./planted acre)	57.92	60.05	55.14	52.73	55.10	45.89	60.68	58.05	38.86	65.18	66.51	48.71

Table 11B--Oats production economic costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	84.63	103.47	79.99	80.06	93.19	60.68	52.52	75.93	106.26	101.11	73.04	59.09
Oats straw	31.32	33.23	39.08	38.70	30.02	34.36	28.25	13.37	22.89	20.52	17.46	21.72
Total, gross value of production	115.95	136.70	119.07	118.76	123.21	95.04	80.77	89.30	129.15	121.63	90.50	80.81
Economic (full ownership) costs:												
Variable cash expenses	45.14	49.94	52.72	49.80	51.73	46.50	41.18	45.52	48.96	51.87	53.72	51.50
General farm overhead	5.76	7.46	5.15	5.48	5.61	4.52	4.93	3.22	3.24	3.15	3.71	3.24
Taxes and insurance	13.03	13.02	15.47	16.48	17.90	17.25	20.17	16.18	16.02	16.58	16.97	15.14
Capital replacement	18.35	19.76	24.30	26.26	26.05	20.70	30.76	21.24	22.50	25.85	25.47	26.61
Operating capital	1.35	1.80	1.65	1.26	1.49	1.07	0.71	0.72	0.88	1.04	0.97	0.71
Nonland capital	3.82	3.74	4.93	4.80	6.04	4.57	6.85	4.13	5.11	7.23	7.75	9.04
Land	29.39	28.12	33.38	31.83	33.50	22.09	18.17	24.42	34.40	33.55	28.53	29.34
Unpaid labor	11.96	13.14	14.19	13.79	14.14	12.89	16.28	19.15	19.78	21.45	22.48	23.71
Total, economic costs	128.80	136.98	151.78	149.70	156.46	129.59	139.05	134.58	150.89	160.72	159.60	159.29
Residual returns to management and risk	-12.85	-0.28	-32.71	-30.94	-33.25	-34.55	-58.28	-45.28	-21.74	-39.09	-69.10	-78.48
Harvest-period price (dollars/bu.)	1.46	1.72	1.45	1.52	1.69	1.32	0.87	1.31	2.73	1.55	1.10	1.21
Yield (bu./planted acre)	57.92	60.05	55.14	52.73	55.10	45.89	60.68	58.05	38.86	65.18	66.51	48.71

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1988.

Table 12A--Oats production cash costs and returns, Northern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	51.81	72.15	74.08	59.06	70.24	44.31	42.90	63.11	72.03	54.99	56.01	62.02
Oats straw	16.89	19.66	6.74	6.27	7.24	8.03	6.71	3.24	5.59	5.18	4.59	3.21
Total, gross value of production	68.70	91.81	80.82	65.33	77.48	52.34	49.61	66.35	77.62	60.17	60.60	65.23
Cash expenses:												
Seed	4.52	6.17	6.18	4.80	6.65	6.27	4.19	5.00	6.17	7.18	6.52	5.70
Fertilizer	4.82	4.75	7.74	7.08	7.88	7.53	6.54	6.86	7.22	7.74	6.58	7.19
Chemicals	0.61	0.69	0.98	1.05	1.01	1.01	0.95	0.88	0.95	1.03	0.97	1.02
Custom operations 1/	2.99	3.33	2.66	2.34	2.71	1.59	1.34	2.75	3.14	2.57	4.23	4.10
Fuel, lube, and electricity	6.83	8.28	9.45	8.22	6.89	6.62	5.00	4.02	4.02	5.38	6.13	6.98
Repairs	5.34	6.60	7.24	7.29	7.20	5.81	6.95	4.76	4.98	6.77	7.15	8.05
Hired labor	0.88	1.05	1.11	1.11	1.20	1.05	1.34	3.23	3.48	3.85	3.79	3.27
Other variable cash expenses 2/	0.63	0.66	0.51	0.51	0.52	0.51	0.36	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	26.62	31.53	35.87	32.40	34.06	30.39	26.67	27.50	29.96	34.52	35.37	36.31
General farm overhead	3.53	4.74	3.94	4.26	4.38	2.30	2.65	2.19	2.19	2.14	2.40	2.10
Taxes and insurance	6.31	6.96	7.55	7.39	8.03	7.66	9.40	6.81	7.26	7.91	8.09	7.22
Interest	6.91	12.61	11.85	12.28	11.81	6.22	5.63	2.56	2.65	2.76	2.92	2.68
Total, fixed cash expenses	16.75	24.31	23.34	23.93	24.22	16.18	17.68	11.56	12.10	12.81	13.41	12.00
Total, cash expenses	43.37	55.84	59.21	56.33	58.28	46.57	44.35	39.06	42.06	47.33	48.78	48.31
Gross value of production less cash expenses	25.33	35.97	21.61	9.00	19.20	5.77	5.26	27.29	35.56	12.84	11.82	16.92
Harvest-period price (dollars/bu.)	1.47	1.72	1.36	1.33	1.55	1.12	0.85	1.32	2.66	1.47	1.05	1.17
Yield (bu./planted acre)	35.16	41.95	54.57	44.29	45.39	39.56	50.37	47.97	27.07	37.35	53.25	52.75

Table 12B--Oats production economic costs and returns, Northern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Oats	51.81	72.15	74.08	59.06	70.24	44.31	42.90	63.11	72.03	54.99	56.01	62.02
Oats straw	16.89	19.66	6.74	6.27	7.24	8.03	6.71	3.24	5.59	5.18	4.59	3.21
Total, gross value of production	68.70	91.81	80.82	65.33	77.48	52.34	49.61	66.35	77.62	60.17	60.60	65.23
Economic (full ownership) costs:												
Variable cash expenses	26.62	31.53	35.87	32.40	34.06	30.39	26.67	27.50	29.96	34.52	35.37	36.31
General farm overhead	3.53	4.74	3.94	4.26	4.38	2.30	2.65	2.19	2.19	2.14	2.40	2.10
Taxes and insurance	6.31	6.96	7.55	7.39	8.03	7.66	9.40	6.81	7.26	7.91	8.09	7.22
Capital replacement	13.42	16.28	18.24	18.59	19.28	15.26	21.33	15.21	15.92	20.59	19.44	20.31
Operating capital	0.77	1.08	0.92	0.68	0.79	0.63	0.38	0.46	0.56	0.64	0.57	0.42
Other nonland capital	2.75	3.05	3.65	3.29	4.22	3.15	4.40	2.81	3.44	5.91	6.40	7.46
Land	14.95	19.88	21.13	18.13	20.01	12.36	11.63	18.80	23.36	18.37	20.23	21.53
Unpaid labor	6.47	7.74	8.17	8.18	8.80	7.68	9.85	6.06	7.10	7.02	7.41	7.33
Total, economic costs	74.82	91.26	99.47	92.92	99.57	79.43	86.31	79.84	89.79	97.10	99.91	102.68
Residual returns to management and risk	-6.12	0.55	-18.65	-27.59	-22.09	-27.09	-36.70	-13.49	-12.17	-36.93	-39.31	-37.45
Harvest-period price (dollars/bu.)	1.47	1.72	1.36	1.33	1.55	1.12	0.85	1.32	2.66	1.47	1.05	1.17
Yield (bu./planted acre)	35.16	41.95	54.57	44.29	45.39	39.56	50.37	47.97	27.07	37.35	53.25	52.75

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1988.

Figure 11

Barley Production Regions

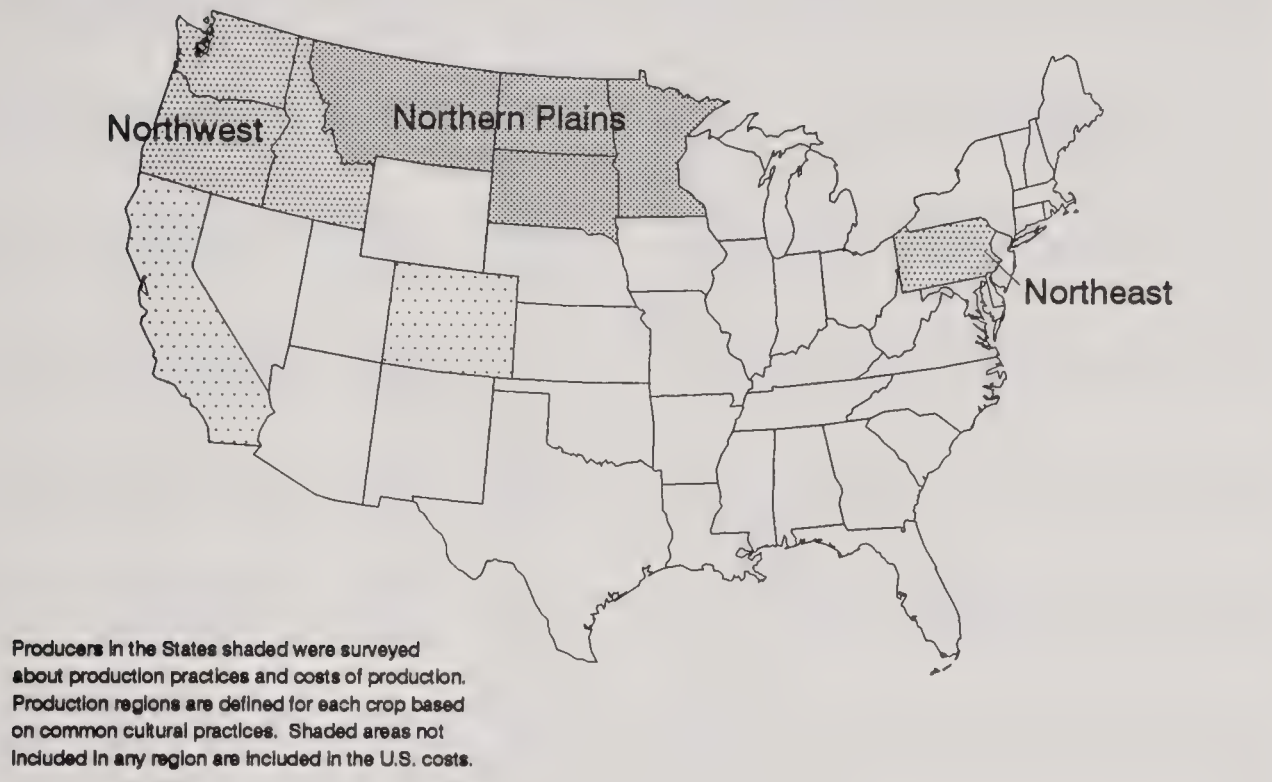
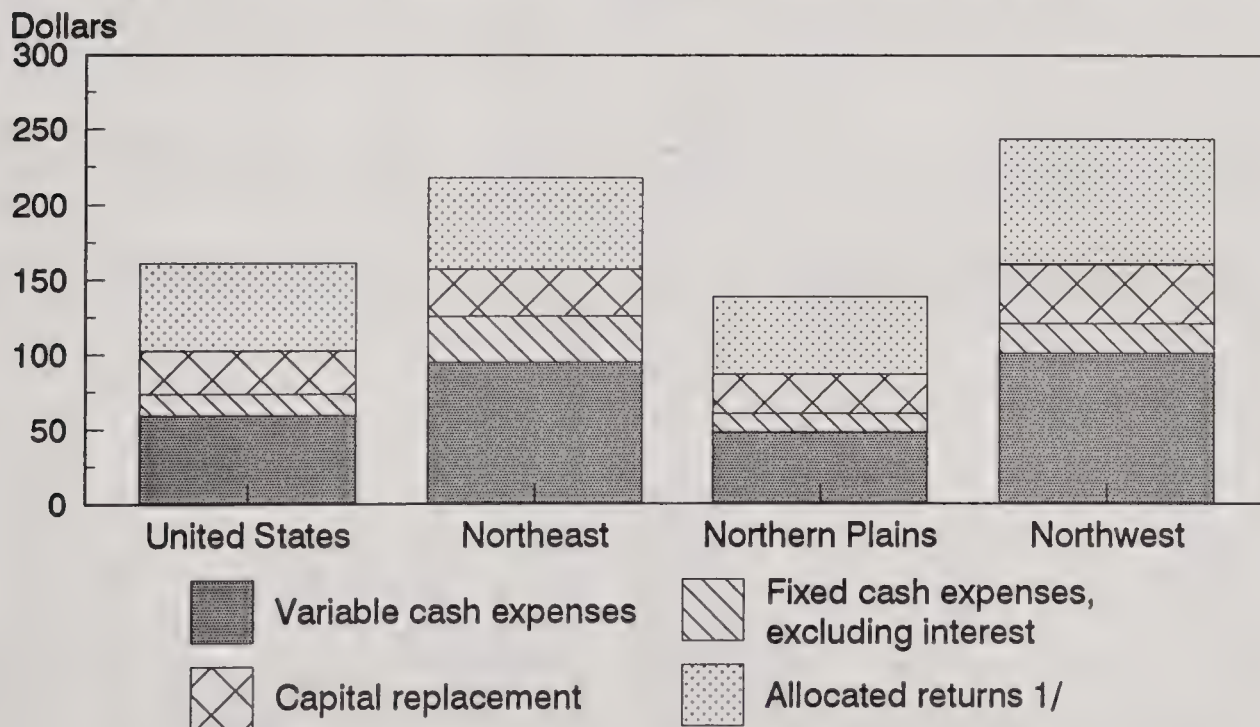


Figure 12

Barley production economic costs per planted acre, 1991



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to barley production rather than some other income-producing use.

Table 13A--U.S. barley production cash costs and returns, 1980-92F

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	113.75	119.99	114.07	116.99	115.52	83.46	68.92	80.00	79.87	115.21	106.99	106.93
Barley straw	4.94	4.81	3.58	3.32	3.75	3.58	2.31	2.28	3.47	3.55	3.27	2.82
Total, gross value of production	118.69	124.80	117.65	120.31	119.27	87.04	71.23	82.28	83.34	118.76	110.26	109.75
Cash expenses:												
Seed	5.76	7.55	6.54	5.53	6.48	6.08	7.35	5.92	6.30	8.52	7.50	6.48
Fertilizer, lime, and gypsum	14.35	14.85	18.14	16.24	16.31	15.66	13.95	13.12	14.88	15.74	14.30	15.12
Chemicals	3.73	4.11	5.71	5.91	6.04	6.03	6.29	6.17	6.31	6.50	6.81	7.40
Custom operations 1/	1.50	2.50	4.33	3.90	3.60	3.00	2.66	2.66	2.14	2.80	3.03	3.16
Fuel, lube, and electricity	14.57	14.84	13.12	11.74	10.18	10.88	7.02	7.18	7.05	8.14	8.54	9.08
Repairs	9.53	10.56	9.44	9.66	9.56	9.00	7.56	7.06	6.89	8.18	8.17	8.55
Hired labor	5.29	5.24	5.09	5.20	4.94	4.91	6.13	5.85	6.14	6.71	7.01	7.29
Other variable cash expenses 2/	1.50	1.76	2.30	2.31	2.35	2.33	2.55	2.34	2.33	2.41	2.43	2.46
Total, variable cash expenses	56.23	61.41	64.67	60.49	59.46	57.89	53.51	50.30	52.04	59.00	57.79	59.54
General farm overhead	8.23	9.35	8.36	9.33	9.35	5.49	6.28	5.98	6.45	6.21	7.16	6.46
Taxes and insurance	8.96	9.17	8.28	8.53	8.91	9.00	7.96	7.38	7.01	8.10	7.71	7.91
Interest	17.71	25.88	19.07	24.36	24.91	13.56	13.73	10.32	9.51	9.78	10.76	10.18
Total, fixed cash expenses	34.90	44.40	35.71	42.22	43.17	28.05	27.97	23.68	22.97	24.09	25.63	24.55
Total, cash expenses	91.13	105.81	100.38	102.71	102.63	85.94	81.48	73.98	75.01	83.09	83.42	84.09
Gross value of production less cash expenses	27.56	18.99	17.27	17.60	16.64	1.10	-10.25	8.30	8.33	35.67	26.84	25.66
Harvest-period price (dollars/bu.)	2.63	2.42	2.13	2.36	2.29	1.86	1.47	1.69	2.90	2.63	2.12	2.07
Yield (bu./planted acre)	43.28	49.61	53.44	49.65	50.46	44.96	46.83	47.42	27.54	43.88	50.48	51.58

Table 13B--U.S. barley production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	113.75	119.99	114.07	116.99	115.52	83.46	68.92	80.00	79.87	115.21	106.99	106.93
Barley straw	4.94	4.81	3.58	3.32	3.75	3.58	2.31	2.28	3.47	3.55	3.27	2.82
Total, gross value of production	118.69	124.80	117.65	120.31	119.27	87.04	71.23	82.28	83.34	118.76	110.26	109.75
Economic (full ownership) costs:												
Variable cash expenses	56.23	61.41	64.67	60.49	59.46	57.89	53.51	50.30	52.04	59.00	57.79	59.54
General farm overhead	8.23	9.35	8.36	9.33	9.35	5.49	6.28	5.98	6.45	6.21	7.16	6.46
Taxes and insurance	8.96	9.17	8.28	8.53	8.91	9.00	7.96	7.38	7.01	8.10	7.71	7.91
Capital replacement	23.29	25.01	23.71	24.56	24.94	24.06	24.41	23.61	22.81	27.43	27.58	28.85
Operating capital	1.74	2.24	2.03	1.53	1.65	1.30	0.82	0.84	1.03	1.33	1.19	0.89
Other nonland capital	4.73	4.60	4.18	3.90	4.89	4.47	4.48	4.26	4.68	6.89	7.63	8.91
Land	28.06	28.88	31.25	31.83	30.77	21.15	26.70	28.38	30.18	36.32	34.59	35.61
Unpaid labor	5.96	5.91	5.73	5.87	5.58	5.54	11.07	10.49	11.10	12.15	12.59	12.78
Total, economic costs	137.20	146.57	148.21	146.04	145.55	128.90	135.23	131.24	135.30	157.43	156.24	160.95
Residual returns to management and risk	-18.51	-21.77	-30.56	-25.73	-26.28	-41.86	-64.00	-48.96	-51.96	-38.67	-45.98	-51.20
Harvest-period price (dollars/bu.)	2.63	2.42	2.13	2.36	2.29	1.86	1.47	1.69	2.90	2.63	2.12	2.07
Yield (bu./planted acre)	43.28	49.61	53.44	49.65	50.46	44.96	46.83	47.42	27.54	43.88	50.48	51.58

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1986.

Table 14A--Barley production cash costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	113.50	104.98	94.65	112.93	124.24	93.75	75.21	80.51	156.09	108.65	136.93	95.76
Barley straw	41.16	73.50	67.62	67.62	70.07	55.32	44.80	53.60	63.71	55.93	65.25	69.91
Total, gross value of production	154.66	178.48	162.27	180.55	194.31	149.07	120.01	134.11	219.80	164.58	202.18	165.67
Cash expenses:												
Seed	8.93	9.26	9.15	8.60	9.92	9.59	17.30	15.79	15.35	17.41	16.98	17.29
Fertilizer, lime, and gypsum	25.42	26.66	26.40	24.09	25.34	24.28	25.78	25.43	29.43	32.18	29.60	32.05
Chemicals	0.15	0.17	0.18	0.19	0.19	0.19	2.66	2.66	2.70	2.83	2.98	3.24
Custom operations 1/	5.80	5.81	6.65	6.74	6.84	6.98	7.27	6.93	7.96	7.87	9.26	9.58
Fuel, lube, and electricity	13.17	15.04	13.75	12.69	11.03	11.90	6.42	6.65	7.00	7.83	9.03	10.04
Repairs	8.35	9.00	8.62	9.00	8.38	8.45	7.39	7.34	8.02	8.32	8.95	9.36
Hired labor	8.38	8.86	9.15	8.83	8.42	8.92	10.29	9.72	11.62	12.09	12.28	13.28
Other variable cash expenses 2/	1.88	1.94	1.92	1.93	1.96	1.95	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	72.08	76.74	75.82	72.07	72.08	72.26	77.11	74.52	82.08	88.53	89.08	94.84
General farm overhead	17.51	9.55	5.36	10.31	10.51	11.42	5.65	5.52	5.85	5.67	6.56	5.95
Taxes and insurance	15.65	15.18	19.28	20.69	20.89	22.19	20.50	20.71	22.16	23.58	23.84	24.82
Interest	25.26	14.84	15.07	12.94	15.56	19.13	5.81	4.45	4.05	4.17	4.58	4.37
Total, fixed cash expenses	58.42	39.57	39.71	43.94	46.96	52.74	31.96	30.68	32.06	33.42	34.98	35.14
Total, cash expenses	130.50	116.31	115.53	116.01	119.04	125.00	109.07	105.20	114.14	121.95	124.06	129.98
Gross value of production less cash expenses	24.16	62.17	46.74	64.54	75.27	24.07	10.94	28.91	105.66	42.63	78.12	35.69
Harvest-period price (dollars/bu.)	2.42	2.20	1.96	2.20	2.56	1.62	1.35	1.53	2.58	1.95	2.15	1.71
Yield (bu./planted acre)	46.90	47.72	48.29	51.33	48.53	57.87	55.71	52.62	60.50	55.72	63.69	56.00

Table 14B--Barley production economic costs and returns, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments)												
Barley	113.50	104.98	94.65	112.93	124.24	93.75	75.21	80.51	156.09	108.65	136.93	95.76
Barley straw	41.16	73.50	67.62	67.62	70.07	55.32	44.80	53.60	63.71	55.93	65.25	69.91
Total, gross value of production	154.66	178.48	162.27	180.55	194.31	149.07	120.01	134.11	219.80	164.58	202.18	165.67
Economic (full ownership) costs:												
Variable cash expenses	72.08	76.74	75.82	72.07	72.08	72.26	77.11	74.52	82.08	88.53	89.08	94.84
General farm overhead	17.51	9.55	5.36	10.31	10.51	11.42	5.65	5.52	5.85	5.67	6.56	5.95
Taxes and insurance	15.65	15.18	19.28	20.69	20.89	22.19	20.50	20.71	22.16	23.58	23.84	24.82
Capital replacement	19.87	20.93	24.31	25.63	28.94	29.41	24.42	24.50	26.10	27.90	29.42	31.30
Operating capital	1.78	2.31	1.65	1.24	1.41	1.10	0.94	2.38	3.01	3.79	3.45	2.68
Other nonland capital	4.17	4.00	5.34	5.08	6.75	6.51	4.73	4.64	5.82	7.40	8.49	9.91
Land	17.65	19.02	31.45	30.78	34.27	29.17	26.50	29.63	33.39	34.75	31.88	30.82
Unpaid labor	9.44	10.00	10.31	9.95	9.51	10.06	13.63	12.92	14.58	16.07	16.33	17.66
Total, economic costs	158.15	157.73	173.52	175.75	184.36	182.12	173.48	174.82	192.99	207.69	209.05	217.98
Residual returns to management and risk	-3.49	20.75	-11.25	4.80	9.95	-33.05	-53.47	-40.71	26.81	-43.11	-6.87	-52.31
Harvest-period price (dollars/bu.)	2.42	2.20	1.96	2.20	2.56	1.62	1.35	1.53	2.58	1.95	2.15	1.71
Yield (bu./planted acre)	46.90	47.72	48.29	51.33	48.53	57.87	55.71	52.62	60.50	55.72	63.69	56.00

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1986.

Table 15A--Barley production cash costs and returns, Northern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	80.44	99.39	91.55	92.81	93.95	65.11	51.16	63.42	51.24	96.28	90.20	88.87
Barley straw	4.98	4.31	2.29	2.14	2.93	3.27	1.29	1.33	2.35	2.00	1.55	1.20
Total, gross value of production	85.42	103.70	93.84	94.95	96.88	68.38	52.45	64.75	53.59	98.28	91.75	90.07
Cash expenses:												
Seed	4.56	6.04	4.97	4.14	5.54	5.01	6.08	4.62	5.15	7.47	6.37	5.24
Fertilizer, lime, and gypsum	12.14	12.50	15.39	13.76	14.51	14.20	12.90	12.26	14.29	14.62	12.69	13.73
Chemicals	3.06	3.34	5.20	5.36	5.52	5.51	5.38	5.45	5.56	5.70	6.04	6.56
Custom operations 1/	0.36	0.38	1.74	1.69	4.30	1.53	1.95	2.01	1.26	1.95	2.18	2.28
Fuel, lube, and electricity	10.39	12.16	10.01	8.95	7.46	8.27	3.94	4.84	4.43	5.25	5.97	6.39
Repairs	8.34	9.83	7.66	8.00	7.93	7.46	6.29	5.88	5.31	6.83	6.76	7.07
Hired labor	3.83	4.30	4.11	4.28	4.18	4.15	4.36	4.23	4.35	4.77	5.02	5.34
Other variable cash expenses 2/	0.53	0.51	0.52	0.52	0.53	0.52	1.17	1.24	1.09	1.11	1.13	1.14
Total, variable cash expenses	43.21	49.06	49.60	46.70	47.44	46.66	42.07	40.53	41.44	47.70	46.16	47.75
General farm overhead	5.75	7.81	5.87	7.19	7.39	3.54	5.23	5.14	5.51	5.26	6.10	5.57
Taxes and insurance	6.61	7.23	7.00	7.31	7.80	7.89	6.99	6.54	5.96	7.13	6.71	6.85
Interest	11.25	22.35	16.23	20.07	20.89	9.77	12.21	9.41	8.64	8.82	9.74	9.34
Total, fixed cash expenses	23.61	37.39	29.10	34.57	36.08	21.20	24.43	21.09	20.11	21.21	22.55	21.76
Total, cash expenses	66.82	86.45	78.70	81.27	83.54	67.86	66.50	61.62	61.55	68.91	68.71	69.51
Gross value of production less cash expenses	18.60	17.25	15.14	13.68	13.34	0.52	-14.05	3.13	-7.96	29.37	23.04	20.56
Harvest-period price (dollars/bu.)	2.49	2.18	1.82	2.13	2.11	1.59	1.18	1.47	3.04	2.54	1.93	1.89
Yield (bu./planted acre)	32.31	45.69	50.18	43.55	44.54	41.08	43.28	43.05	16.87	37.88	46.66	46.91

Table 15B--Barley production economic costs and returns, Northern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	80.44	99.39	91.55	92.81	93.95	65.11	51.16	63.42	51.24	96.28	90.20	88.87
Barley straw	4.98	4.31	2.29	2.14	2.93	3.27	1.29	1.33	2.35	2.00	1.55	1.20
Total, gross value of production	85.42	103.70	93.84	94.95	96.88	68.38	52.45	64.75	53.59	98.28	91.75	90.07
Economic (full ownership) costs:												
Variable cash expenses	43.21	49.06	49.60	46.70	47.44	46.66	42.07	40.53	41.44	47.70	46.16	47.75
General farm overhead	5.75	7.81	5.87	7.19	7.39	3.54	5.23	5.14	5.51	5.26	6.10	5.57
Taxes and insurance	6.61	7.23	7.00	7.31	7.80	7.89	6.99	6.54	5.96	7.13	6.71	6.85
Capital replacement	20.26	23.66	22.28	23.05	23.06	22.37	22.80	22.02	20.19	25.69	25.52	26.69
Operating capital	1.29	1.71	1.64	1.28	1.42	1.13	0.56	0.59	0.72	0.95	0.82	0.62
Other nonland capital	4.13	4.42	4.00	3.70	4.60	4.22	4.21	3.99	4.12	6.45	7.09	8.28
Land	25.47	29.55	28.89	28.56	27.75	18.75	23.32	24.32	23.25	30.40	29.76	29.98
Unpaid labor	4.32	4.85	4.64	4.83	4.71	4.69	10.62	10.24	10.95	12.02	12.42	12.61
Total, economic costs	111.04	128.29	123.91	122.62	124.18	109.24	115.80	113.37	112.14	135.60	134.58	138.35
Residual returns to management and risk	-25.62	-24.59	-30.07	-27.67	-27.30	-40.86	-63.35	-48.62	-58.55	-37.32	-42.83	-48.28
Harvest-period price (dollars/bu.)	2.49	2.18	1.82	2.13	2.11	1.59	1.18	1.47	3.04	2.54	1.93	1.89
Yield (bu./planted acre)	32.31	45.69	50.18	43.55	44.54	41.08	43.28	43.05	16.87	37.88	46.66	46.91

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1986.

Table 16A--Barley production cash costs and returns, Northwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	178.63	148.38	149.40	163.42	152.99	115.73	116.33	138.57	161.33	173.62	167.61	180.40
Barley straw	4.04	2.47	4.64	4.38	4.46	3.43	3.54	3.53	4.84	5.48	6.34	4.94
Total, gross value of production	182.67	150.85	154.04	167.80	157.45	119.16	119.87	142.10	166.17	179.10	173.95	185.34
Cash expenses:												
Seed	7.34	9.16	7.87	7.21	7.78	7.59	10.41	9.43	9.20	11.07	10.52	10.40
Fertilizer, lime, and gypsum	15.85	17.71	20.69	19.57	19.37	18.44	17.63	16.78	17.38	19.82	20.70	20.16
Chemicals	4.96	5.57	6.82	7.33	7.56	7.77	8.81	8.74	8.84	9.23	9.60	10.43
Custom operations 1/	0.81	0.91	3.97	3.91	3.96	3.33	3.87	4.26	4.13	4.83	5.29	5.44
Fuel, lube, and electricity	20.65	18.62	15.23	15.01	13.71	13.29	15.27	15.80	16.13	18.17	18.34	18.98
Repairs	13.05	12.71	12.87	13.49	13.29	12.58	11.65	11.84	12.65	13.33	13.92	14.56
Hired labor	6.22	5.87	5.98	6.61	6.05	6.11	10.88	11.10	11.47	12.65	13.83	13.71
Other variable cash expenses 2/	1.01	0.92	3.57	3.58	3.64	3.62	5.98	6.01	6.35	6.62	7.06	7.14
Total, variable cash expenses	69.89	71.47	77.00	76.71	75.37	72.73	84.50	83.96	86.15	95.72	99.26	100.82
General farm overhead	13.25	11.46	11.26	12.31	12.58	9.06	9.35	9.14	9.83	9.63	11.26	9.40
Taxes and insurance	11.08	11.70	9.32	9.99	10.63	11.08	9.45	9.22	9.28	9.89	9.89	10.36
Interest	32.44	31.35	22.08	30.60	32.10	20.50	18.07	13.88	12.81	13.37	14.89	13.81
Total, fixed cash expenses	56.77	54.51	42.66	52.90	55.31	40.64	36.87	32.24	31.92	32.89	36.04	33.57
Total, cash expenses	126.66	125.98	119.66	129.61	130.68	113.37	121.37	116.20	118.07	128.61	135.30	134.39
Gross value of production less cash expenses	56.01	24.87	34.38	38.19	26.77	5.79	-1.50	25.90	48.10	50.49	38.65	50.95
Harvest-period price (dollars/bu.)	2.68	2.63	2.58	2.61	2.39	2.22	2.05	2.16	2.70	2.73	2.55	2.60
Yield (bu./planted acre)	66.64	56.36	57.94	62.58	64.08	52.05	56.65	64.21	59.66	63.68	65.83	69.36

Table 16B--Barley production economic costs and returns, Northwest, 1980-91

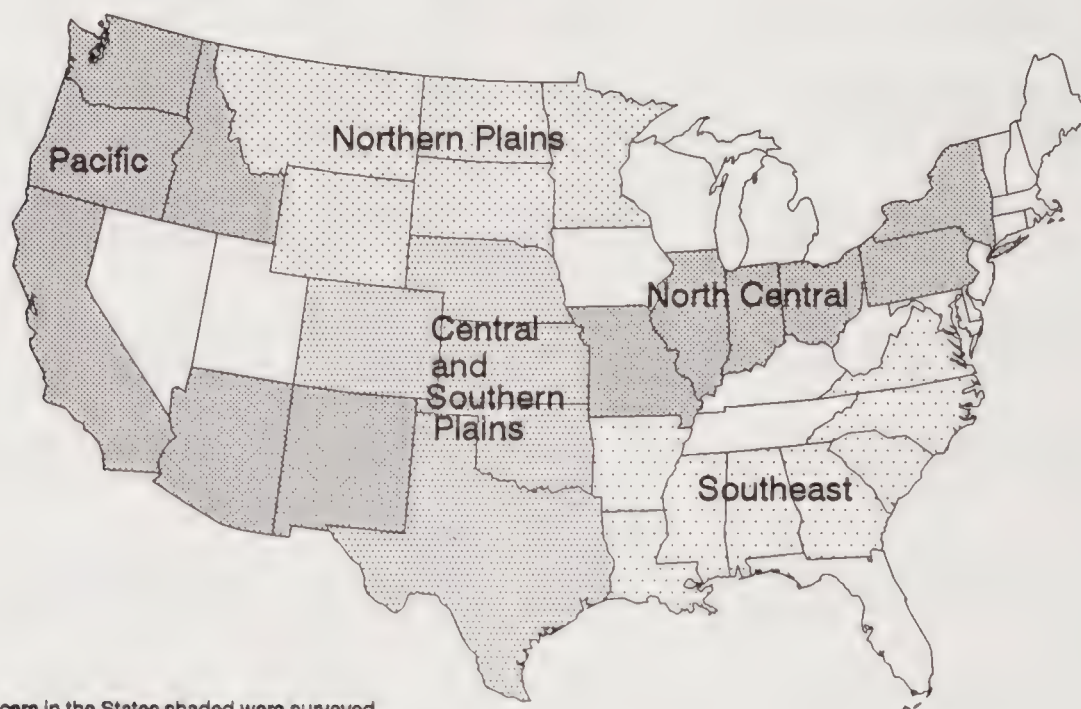
Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Barley	178.63	148.38	149.40	163.42	152.99	115.73	116.33	138.57	161.33	173.62	167.61	180.40
Barley straw	4.04	2.47	4.64	4.38	4.46	3.43	3.54	3.53	4.84	5.48	6.34	4.94
Total, gross value of production	182.67	150.85	154.04	167.80	157.45	119.16	119.87	142.10	166.17	179.10	173.95	185.34
Economic (full ownership) costs:												
Variable cash expenses	69.89	71.47	77.00	76.71	75.37	72.73	84.50	83.96	86.15	95.72	99.26	100.82
General farm overhead	13.25	11.46	11.26	12.31	12.58	9.06	9.35	9.14	9.83	9.63	11.26	9.40
Taxes and insurance	11.08	11.70	9.32	9.99	10.63	11.08	9.45	9.22	9.28	9.89	9.89	10.36
Capital replacement	31.63	31.07	26.88	28.37	29.40	27.96	31.17	31.69	33.70	36.12	37.88	39.63
Operating capital	1.80	2.34	2.09	1.64	1.80	1.41	1.46	1.60	1.89	2.43	2.33	1.73
Other nonland capital	6.43	5.66	4.60	4.39	5.58	5.05	5.63	5.64	6.97	9.03	10.34	12.08
Land	33.69	26.44	37.56	41.03	38.65	26.90	35.62	41.44	49.55	53.18	51.46	56.46
Unpaid labor	7.02	6.61	6.75	7.46	6.83	6.90	11.16	10.95	11.13	12.13	12.87	12.95
Total, economic costs	174.79	166.75	175.46	181.90	180.83	161.08	188.34	193.64	208.50	228.13	235.29	243.43
Residual returns to management and risk	7.88	-15.90	-21.42	-14.10	-23.38	-41.92	-68.47	-51.54	-42.33	-49.03	-61.34	-58.09
Harvest-period price (dollars/bu.)	2.68	2.63	2.58	2.61	2.39	2.22	2.05	2.16	2.70	2.73	2.55	2.60
Yield (bu./planted acre)	66.64	56.36	57.94	62.58	64.08	52.05	56.65	64.21	59.66	63.68	65.83	69.36

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1986.

Figure 13

Wheat Production Regions

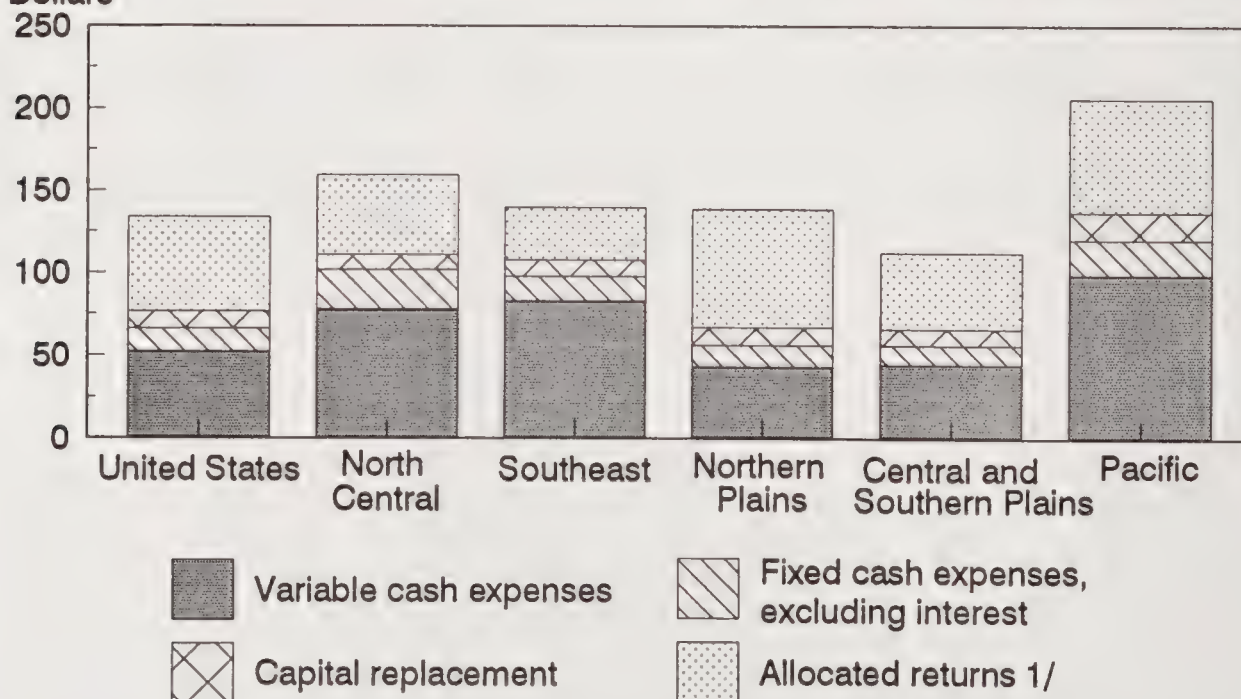


Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Figure 14

Wheat production economic costs per planted acre, 1991

Dollars



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land and unpaid labor) to wheat production rather than some other income-producing use.

Table 17A--U.S. Wheat production cash costs and returns, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	99.90	94.27	72.68
Wheat straw	3.45	1.52	1.21
Total, gross value of production	103.35	95.79	73.89
Cash expenses:			
Seed	7.68	7.69	5.87
Fertilizer, lime, and gypsum	16.70	14.59	15.30
Chemicals	5.02	5.45	5.73
Custom operations 1/	4.11	4.56	4.25
Fuel, lube, and electricity	7.96	8.72	8.96
Repairs	6.39	6.51	6.70
Hired labor	4.95	4.92	5.34
Other variable cash expenses 2/	0.20	0.20	0.18
Total, variable cash expenses	53.01	52.64	52.33
General farm overhead	5.01	6.47	5.15
Taxes and insurance	8.72	10.28	8.88
Interest	8.77	10.99	5.89
Total, fixed cash expenses	22.50	27.74	19.92
Total, cash expenses	75.51	80.38	72.25
Gross value of production less cash expenses	27.84	15.41	1.64
Harvest-period price (dollars/bu.)	3.81	2.78	2.57
Yield (bu./planted acre)	26.22	33.91	28.28

Table 17B--U.S. Wheat production economic costs and returns, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	99.90	94.27	72.68
Wheat straw	3.45	1.52	1.21
Total, gross value of production	103.35	95.79	73.89
Economic (full ownership) costs:			
Variable cash expenses	53.01	52.64	52.33
General farm overhead	5.01	6.47	5.15
Taxes and insurance	8.72	10.28	8.88
Capital replacement	9.66	9.89	10.60
Operating capital	2.12	1.97	1.42
Other nonland capital	9.67	10.67	12.18
Land	47.57	46.33	33.92
Unpaid labor	8.67	11.24	9.48
Total, economic costs	144.43	149.49	133.96
Residual returns to management and risk	-41.08	-53.70	-60.07
Harvest-period price (dollars/bu.)	3.81	2.78	2.57
Yield (bu./planted acre)	26.22	33.91	28.28

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Table 18A--Wheat production cash costs and returns, North Central,
1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	198.68	132.39	82.15
Wheat straw	13.51	12.15	10.77
Total, gross value of production	212.19	144.54	92.92
Cash expenses:			
Seed	13.47	13.43	11.94
Fertilizer, lime, and gypsum	44.99	36.76	42.44
Chemicals	2.36	2.33	2.73
Custom operations 1/	5.40	5.59	5.72
Fuel, lube, and electricity	6.02	5.05	6.81
Repairs	4.18	3.18	4.56
Hired labor	3.46	3.11	3.72
Total, variable cash expenses	79.88	69.45	77.92
General farm overhead	8.12	7.38	8.42
Taxes and insurance	13.71	15.20	15.66
Interest	13.24	11.19	8.93
Total, fixed cash expenses	35.07	33.77	33.01
Total, cash expenses	114.95	103.22	110.93
Gross value of production less cash expenses	97.24	41.32	-18.01
Harvest-period price (dollars/bu.)	3.75	2.90	2.45
Yield (bu./planted acre)	52.98	45.65	33.53

Table 18B--Wheat production economic costs and returns, North Central,
1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	198.68	132.39	82.15
Wheat straw	13.51	12.15	10.77
Total, gross value of production	212.19	144.54	92.92
Economic (full ownership) costs:			
Variable cash expenses	79.88	69.45	77.92
General farm overhead	8.12	7.38	8.42
Taxes and insurance	13.71	15.20	15.66
Capital replacement	8.23	5.63	8.97
Operating capital	3.21	2.59	2.12
Other nonland capital	11.76	10.08	14.81
Land	59.52	33.75	13.87
Unpaid labor	15.97	15.20	18.06
Total, economic costs	200.40	159.28	159.83
Residual returns to management and risk	11.79	-14.74	-66.91
Harvest-period price (dollars/bu.)	3.75	2.90	2.45
Yield (bu./planted acre)	52.98	45.65	33.53

1/ Includes cost of technical services.

Table 19A--Wheat production cash costs and returns, Southeast, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments)			
Wheat	137.69	96.56	59.98
Wheat straw	1.53	1.53	1.43
Total, gross value of production	139.22	98.09	61.41
Cash expenses:			
Seed	13.27	13.56	12.73
Fertilizer, lime, and gypsum	36.67	33.34	32.89
Chemicals	5.72	6.42	6.73
Custom operations 1/	7.73	8.92	7.84
Fuel, lube, and electricity	6.38	6.90	7.13
Repairs	5.81	5.43	6.36
Hired labor	8.04	8.21	9.18
Total, variable cash expenses	83.62	82.78	82.86
General farm overhead	6.43	6.54	6.84
Taxes and insurance	8.51	14.72	8.33
Interest	9.66	8.22	6.23
Total, fixed cash expenses	24.60	29.48	21.40
Total, cash expenses	108.22	112.26	104.26
Gross value of production less cash expenses	31.00	-14.17	-42.85
Harvest-period price (dollars/bu.)	3.66	3.12	2.49
Yield (bu./planted acre)	37.62	30.95	24.09

Table 19B--Wheat production economic costs and returns, Southeast, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments)			
Wheat	137.69	96.56	59.98
Wheat straw	1.53	1.53	1.43
Total, gross value of production	139.22	98.09	61.41
Economic (full ownership) costs:			
Variable cash expenses	83.62	82.78	82.86
General farm overhead	6.43	6.54	6.84
Taxes and insurance	8.51	14.72	8.33
Capital replacement	8.83	8.17	9.68
Operating capital	3.36	3.09	2.25
Other nonland capital	8.37	9.06	10.61
Land	16.85	13.63	10.88
Unpaid labor	7.33	7.70	8.42
Total, economic costs	143.30	145.69	139.87
Residual returns to management and risk	-4.08	-47.60	-78.46
Harvest-period price (dollars/bu.)	3.66	3.12	2.49
Yield (bu./planted acre)	37.62	30.95	24.09

1/ Includes cost of technical services.

Table 20A--Wheat production cash costs and returns, Northern Plains,
1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	93.95	83.46	74.67
Wheat straw	0.83	0.84	0.53
Total, gross value of production	94.78	84.30	75.20
Cash expenses:			
Seed	7.47	7.24	4.91
Fertilizer, lime and gypsum	10.84	9.16	9.95
Chemicals	6.40	6.88	7.31
Custom operations 1/	2.54	2.78	2.63
Fuel, lube, and electricity	7.00	8.15	7.90
Repairs	6.35	6.83	6.91
Hired labor	3.58	3.51	3.77
Other variable cash expenses 2/	0.01	0.01	0.01
Total, variable cash expenses	44.19	44.56	43.39
General farm overhead	4.97	6.57	5.10
Taxes and insurance	8.65	9.98	8.15
Interest	9.97	12.73	6.72
Total, fixed cash expenses	23.59	29.28	19.97
Total, cash expenses	67.78	73.84	63.36
Gross value of production less cash expenses	27.00	10.46	11.84
Harvest-period price (dollars/bu.)	3.67	2.55	2.47
Yield (bu./planted acre)	25.60	32.73	30.23

Table 20B--Wheat production economic costs and returns, Northern Plains,
1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	93.95	83.46	74.67
Wheat straw	0.83	0.84	0.53
Total, gross value of production	94.78	84.30	75.20
Economic (full ownership) costs:			
Variable cash expenses	44.19	44.56	43.39
General farm overhead	4.97	6.57	5.10
Taxes and insurance	8.65	9.98	8.15
Capital replacement	9.79	11.24	10.66
Operating capital	1.78	1.66	1.18
Other nonland capital	10.27	11.75	12.95
Land	54.25	49.00	46.90
Unpaid labor	9.63	9.76	10.52
Total, economic costs	143.53	144.52	138.85
Residual returns to management and risk	-48.75	-60.22	-63.65
Harvest-period price (dollars/bu.)	3.67	2.55	2.47
Yield (bu./planted acre)	25.60	32.73	30.23

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Table 21A--Wheat production cash costs and returns, Central and Southern Plains, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	93.03	82.48	60.14
Wheat straw	0.49	0.37	0.39
Total, gross value of production	93.52	82.85	60.53
Cash expenses:			
Seed	5.63	5.81	4.43
Fertilizer, lime, and gypsum	13.05	11.24	11.66
Chemicals	2.80	3.06	3.19
Custom operations 1/	4.52	5.03	4.76
Fuel, lube, and electricity	7.73	8.36	8.73
Repairs	6.61	6.49	7.21
Hired labor	4.50	4.49	4.85
Other variable cash expenses 2/	0.05	0.04	0.05
Total, variable cash expenses	44.89	44.52	44.88
General farm overhead	3.45	5.25	3.60
Taxes and insurance	7.86	8.97	8.21
Interest	5.96	9.06	4.08
Total, fixed cash expenses	17.27	23.28	15.89
Total, cash expenses	62.16	67.80	60.77
Gross value of production less cash expenses	31.36	15.05	-0.24
Harvest-period price (dollars/bu.)	3.86	2.88	2.51
Yield (bu./planted acre)	24.10	28.64	23.96

Table 21B--Wheat production economic costs and returns, Central and Southern Plains, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	93.03	82.48	60.14
Wheat straw	0.49	0.37	0.39
Total, gross value of production	93.52	82.85	60.53
Economic (full ownership) costs:			
Variable cash expenses	44.89	44.52	44.88
General farm overhead	3.45	5.25	3.60
Taxes and insurance	7.86	8.97	8.21
Capital replacement	8.88	8.99	9.70
Operating capital	1.80	1.66	1.22
Other nonland capital	8.92	9.80	11.24
Land	36.44	41.13	26.57
Unpaid labor	6.44	11.91	6.95
Total, economic costs	118.68	132.23	112.37
Residual returns to management and risk	-25.16	-49.38	-51.84
Harvest-period price (dollars/bu.)	3.86	2.88	2.51
Yield (bu./planted acre)	24.10	28.64	23.96

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Table 22A--Wheat production cash costs and returns, Pacific, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	219.97	186.82	119.52
Wheat straw	1.11	1.20	1.14
Total, gross value of production	221.08	188.02	120.66
Cash expenses:			
Seed	11.84	11.84	9.69
Fertilizer, lime, and gypsum	28.16	28.33	28.16
Chemicals	13.33	15.89	14.75
Custom operations 1/	5.77	6.95	5.27
Fuel, lube, and electricity	16.83	19.62	17.14
Repairs	7.66	9.29	8.38
Hired labor	13.62	14.97	13.91
Other variable cash expenses 2/	2.30	2.53	1.83
Total, variable cash expenses	99.51	109.42	99.13
General farm overhead	10.22	12.79	10.52
Taxes and insurance	9.81	11.77	10.65
Interest	14.26	15.91	9.75
Total, fixed cash expenses	34.29	40.47	30.92
Total, cash expenses	133.80	149.89	130.05
Gross value of production less cash expenses	87.28	38.13	-9.39
Harvest-period price (dollars/bu.)	4.12	2.92	3.06
Yield (bu./planted acre)	53.39	63.98	39.06

Table 22B--Wheat production economic costs and returns, Pacific, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production (excluding direct Government payments):			
Wheat	219.97	186.82	119.52
Wheat straw	1.11	1.20	1.14
Total, gross value of production	221.08	188.02	120.66
Economic (full ownership) costs:			
Variable cash expenses	99.51	109.42	99.13
General farm overhead	10.22	12.79	10.52
Taxes and insurance	9.81	11.77	10.65
Capital replacement	15.43	14.36	16.89
Operating capital	4.00	4.09	2.70
Other nonland capital	10.11	12.26	12.77
Land	90.48	84.05	46.39
Unpaid labor	11.54	13.25	6.95
Total, economic costs	251.10	261.99	206.00
Residual returns to management and risk	-30.02	-73.97	-85.34
Harvest-period price (dollars/bu.)	4.12	2.92	3.06
Yield (bu./planted acre)	53.39	63.98	39.06

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Figure 15

Soybean Production Regions

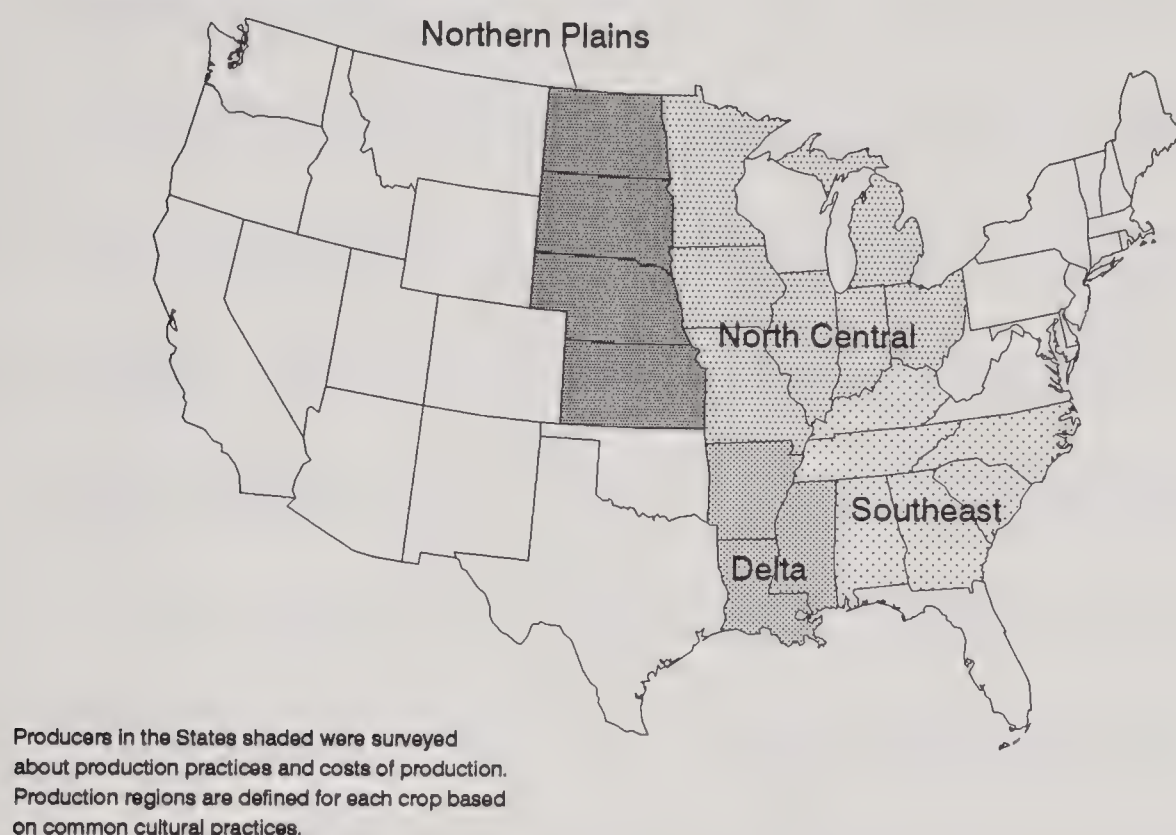
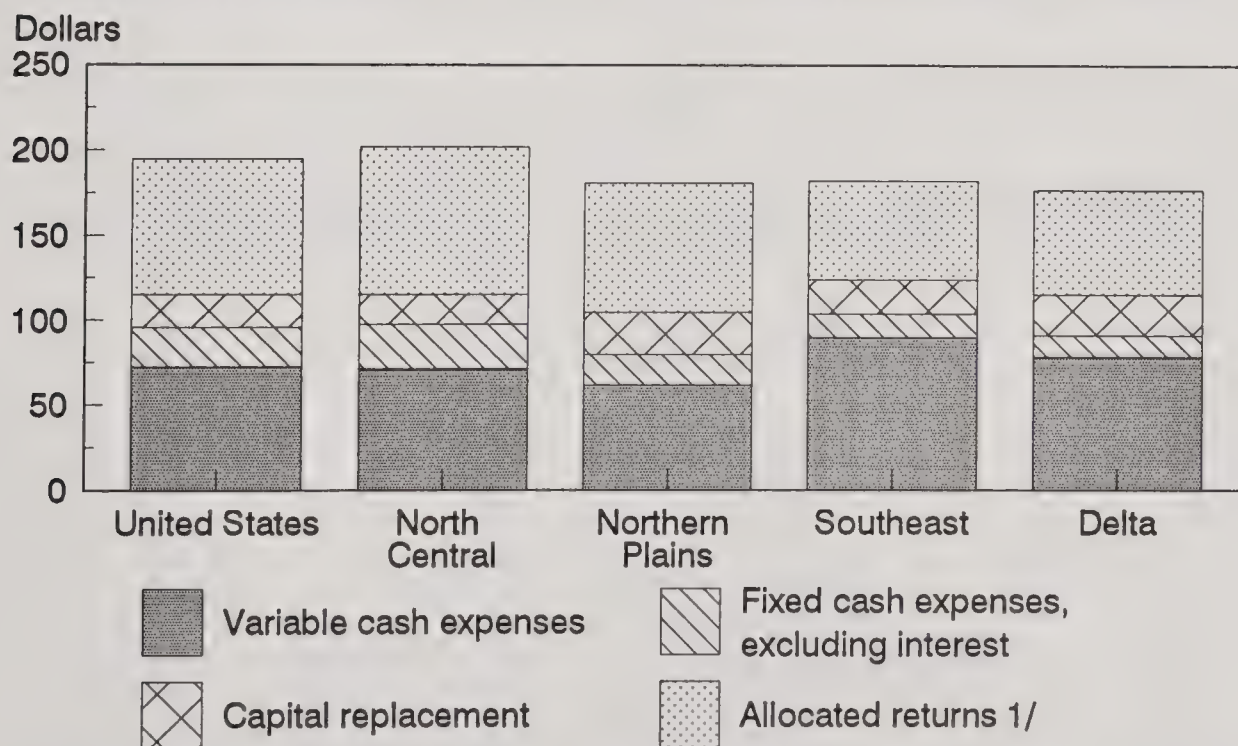


Figure 16

Soybean production economic costs per planted acre, 1991



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land and unpaid labor) to soybean production rather than some other income-producing use.

Table 23A--U.S. soybean production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	199.71	179.48	160.64	204.46	166.72	165.96	150.64	171.66	201.49	175.63	193.57	183.94
Total, gross value of production	199.71	179.48	160.64	204.46	166.72	165.96	150.64	171.66	201.49	175.63	193.57	183.94
Cash expenses:												
Seed	7.87	10.70	8.52	7.98	10.97	12.92	10.82	11.16	12.01	15.04	12.47	12.89
Fertilizer, lime, and gypsum	9.36	9.78	9.46	8.74	8.89	6.18	5.35	5.29	6.61	10.66	9.57	9.34
Chemicals	13.64	14.86	18.33	19.18	19.56	12.41	12.37	12.04	12.24	19.48	20.48	22.51
Custom operations 1/	2.85	3.66	4.01	4.02	4.03	4.06	4.06	4.05	4.05	3.50	3.56	3.66
Fuel, lube, and electricity	12.23	12.93	11.81	10.35	8.42	11.62	7.39	8.97	9.12	8.27	9.06	9.49
Repairs	7.37	7.51	6.46	6.63	6.45	7.04	6.56	6.43	7.30	8.58	8.63	8.92
Hired labor	3.06	2.99	2.39	2.37	2.37	2.45	2.53	2.62	2.80	5.68	5.88	5.91
Other variable cash expenses 2/	0.00	0.09	0.40	0.34	0.36	0.00	0.00	0.00	0.00	0.04	0.04	0.04
Total, variable cash expenses	56.38	62.52	61.38	59.61	61.05	56.68	49.08	50.67	54.13	71.25	69.69	72.76
General farm overhead	10.30	9.56	8.79	10.43	10.81	6.85	7.87	10.81	12.44	8.95	8.23	8.29
Taxes and insurance	10.43	10.45	10.57	11.18	11.94	12.85	13.46	13.94	14.39	16.25	15.63	14.75
Interest	22.75	26.41	27.15	32.57	33.82	20.32	18.16	19.02	19.20	12.08	13.35	14.15
Total, fixed cash expenses	43.48	46.42	46.51	54.18	56.57	40.02	39.49	43.77	46.03	37.28	37.21	37.19
Total, cash expenses	99.86	108.94	107.89	113.79	117.62	96.70	88.57	94.53	100.16	108.53	106.90	109.95
Gross value of production less cash expenses	99.85	70.54	52.75	90.67	49.10	69.26	62.07	77.13	101.33	67.10	86.67	73.99
Harvest-period price (dollars/bu.)	7.72	6.05	5.13	7.95	6.05	4.86	4.57	5.07	7.53	5.53	5.85	5.49
Yield (bu./planted acre)	25.86	29.68	31.32	25.72	27.54	34.17	32.94	33.83	26.76	31.76	33.10	33.48

Table 23B--U.S. soybean production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	199.71	179.48	160.64	204.46	166.72	165.96	150.64	171.66	201.49	175.63	193.57	183.94
Total, gross value of production	199.71	179.48	160.64	204.46	166.72	165.96	150.64	171.66	201.49	175.63	193.57	183.94
Economic (full ownership) costs:												
Variable cash expenses	56.38	62.52	61.38	59.61	61.05	56.68	49.08	50.76	54.13	71.24	69.69	72.76
General farm overhead	10.30	9.56	8.79	10.43	10.81	6.85	7.87	10.81	12.44	8.95	8.23	8.29
Taxes and insurance	10.43	10.45	10.57	11.18	11.94	12.85	13.46	13.94	14.39	16.25	15.63	14.75
Capital replacement	19.37	20.59	23.16	24.50	24.17	29.60	31.48	31.84	34.13	17.94	18.59	19.30
Operating capital	3.00	3.87	2.88	2.21	2.54	1.72	1.08	1.24	1.51	2.86	2.60	1.98
Other nonland capital	3.91	3.70	3.70	3.50	4.32	4.99	5.07	5.05	6.36	12.27	8.98	10.48
Land	64.98	56.86	52.54	63.46	52.71	48.16	43.63	45.56	52.22	46.69	49.86	48.96
Unpaid labor	11.52	11.24	9.01	8.92	8.94	9.22	9.53	9.86	10.54	16.06	16.96	18.40
Total, economic costs	179.89	178.79	172.02	183.81	176.48	170.07	161.20	169.06	185.72	192.26	190.54	194.92
Residual returns to management and risk	19.82	0.69	-11.38	20.65	-9.76	-4.11	-10.56	2.60	15.77	-16.63	3.03	-10.98
Harvest-period price (dollars/bu.)	7.72	6.05	5.13	7.95	6.05	4.86	4.57	5.07	7.53	5.53	5.85	5.49
Yield (bu./planted acre)	25.86	29.68	31.32	25.72	27.54	34.17	32.94	33.83	26.76	31.76	33.10	33.48

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1985 and 1989.

Table 24A--Soybean production cash costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	252.99	207.79	179.05	239.93	183.28	183.50	170.43	190.44	207.12	199.55	220.63	198.95
Total, gross value of production	252.99	207.79	179.05	239.93	183.28	183.50	170.43	190.44	207.12	199.55	220.63	198.95
Cash expenses:												
Seed	8.09	10.26	9.25	8.54	11.60	13.82	11.27	11.58	12.60	16.64	13.52	13.89
Fertilizer, lime, and gypsum	6.58	6.97	6.08	6.85	7.57	4.48	4.04	4.17	5.11	9.02	8.39	8.64
Chemicals	12.24	13.30	17.67	18.57	19.05	12.90	12.90	12.60	12.78	20.52	21.51	23.57
Custom operations 1/	2.49	2.65	3.09	3.16	3.16	4.11	4.16	4.17	4.15	3.93	3.97	4.04
Fuel, lube, and electricity	10.80	12.56	11.41	10.04	8.15	11.35	7.42	8.85	9.03	7.15	7.82	8.20
Repairs	7.04	8.05	5.97	6.11	5.96	6.53	6.30	6.31	7.00	8.00	8.00	8.19
Hired labor	2.96	3.28	2.31	2.26	2.28	2.38	2.50	2.59	2.80	3.82	4.06	4.48
Other variable cash expenses 2/	0.00	0.00	0.31	0.27	0.28	0.00	0.00	0.00	0.00	0.02	0.03	0.02
Total, variable cash expenses	50.20	57.07	56.09	55.80	58.05	55.57	48.59	50.26	53.47	69.10	67.30	71.03
General farm overhead	12.72	11.00	10.21	12.57	12.89	7.21	8.59	12.17	13.20	9.92	9.22	9.17
Taxes and insurance	14.09	14.21	14.32	14.81	15.60	15.19	15.64	15.99	16.59	19.08	19.02	17.50
Interest	27.31	30.40	29.84	41.22	42.23	23.09	20.96	21.78	21.77	14.24	15.60	16.25
Total, fixed cash expenses	54.12	55.61	54.37	68.60	70.72	45.49	45.19	49.94	51.56	43.24	43.84	42.92
Total, cash expenses	104.32	112.68	110.46	124.40	128.77	101.06	93.78	100.20	105.03	112.34	111.14	113.95
Gross value of production less cash expenses	148.67	95.11	68.59	115.53	54.51	82.44	76.65	90.24	102.09	87.21	109.49	85.00
Harvest-period price (dollars/bu.)	7.62	6.04	5.05	7.99	6.04	4.83	4.52	5.00	7.54	5.52	5.87	5.50
Yield (bu./planted acre)	33.19	34.43	35.44	30.01	30.33	38.01	37.74	38.08	27.46	36.15	37.59	36.20

Table 24B--Soybean production economic costs and returns, North Central, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	252.99	207.79	179.05	239.93	183.28	183.50	170.43	190.44	207.12	199.55	220.63	198.95
Total, gross value of production	252.99	207.79	179.05	239.93	183.28	183.50	170.43	190.44	207.12	199.55	220.63	198.95
Economic (full ownership) costs:												
Variable cash expenses	50.20	57.07	56.09	55.80	58.05	55.57	48.59	50.26	53.47	69.10	67.30	71.03
General farm overhead	12.72	11.00	10.21	12.57	12.89	7.21	8.59	12.17	13.20	9.92	9.22	9.17
Taxes and insurance	14.09	14.21	14.32	14.81	15.60	15.19	15.64	15.99	16.59	19.08	19.02	17.50
Capital replacement	19.53	21.74	25.49	26.81	26.33	31.01	33.45	33.40	35.93	16.61	17.20	17.58
Operating capital	2.54	3.48	2.47	1.97	2.29	1.63	1.03	1.19	1.44	2.78	2.51	1.93
Other nonland capital	4.03	4.08	4.09	3.85	4.72	5.18	5.32	5.22	6.61	11.91	8.91	10.23
Land	90.92	75.50	68.07	83.77	67.04	57.62	51.81	53.20	58.69	54.78	58.78	54.61
Unpaid labor	11.13	12.34	8.69	8.48	8.57	8.96	9.41	9.73	10.53	16.92	17.85	19.56
Total, economic costs	205.16	199.42	189.43	208.06	195.49	182.37	173.84	181.16	196.46	201.10	200.79	201.61
Residual returns to management and risk	47.83	8.37	-10.38	31.87	-12.21	1.13	-3.41	9.28	10.66	-1.55	19.84	-2.66
Harvest-period price (dollars/bu.)	7.62	6.04	5.05	7.99	6.04	4.83	4.52	5.00	7.54	5.52	5.87	5.50
Yield (bu./planted acre)	33.19	34.43	35.44	30.01	30.33	38.01	37.74	38.08	27.46	36.15	37.59	36.20

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1985 and 1989.

Table 25A--Soybean production cash costs and returns,
Northern Plains, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production:			
Soybeans	145.94	166.07	153.07
Total, gross value of production	145.94	166.07	153.07
Cash expenses:			
Seed	13.85	11.54	12.24
Fertilizer, lime, and gypsum	3.04	2.61	2.82
Chemicals	15.65	16.46	17.96
Custom operations 1/	2.39	2.47	2.41
Fuel, lube, and electricity	10.42	11.35	11.61
Repairs	9.30	9.26	9.54
Hired labor	5.02	5.05	4.79
Other variable cash expenses	0.20	0.19	0.19
Total, variable cash expenses 2/	59.87	58.93	61.56
General farm overhead	8.22	7.11	6.96
Taxes and insurance	14.20	12.04	11.05
Interest	11.69	12.65	13.08
Total, fixed cash expenses	34.11	31.80	31.09
Total, cash expenses	93.98	90.73	92.65
Gross value of production less cash expenses	51.96	75.34	60.42
Harvest-period price (dollars/bu.)	5.28	5.68	5.33
Yield (bu./planted acre)	27.64	29.26	28.72

Table 25B--Soybean production economic costs and returns,
Northern Plains, 1989-91

Item	1989	1990	1991
Dollars per planted acre			
Gross value of production:			
Soybeans	145.94	166.07	153.07
Total, gross value of production	145.94	166.07	153.07
Economic (full ownership) costs:			
Variable cash expenses	59.87	58.93	61.56
General farm overhead	8.22	7.11	6.96
Taxes and insurance	14.20	12.04	11.05
Capital replacement	23.49	24.30	24.90
Operating capital	2.41	2.20	1.67
Other nonland capital	14.82	10.19	11.68
Land	44.67	47.88	44.16
Unpaid labor	19.24	19.48	18.91
Total, economic costs	186.92	182.13	180.89
Residual returns to management and risk	-40.98	-16.06	-27.82
Harvest-period price (dollars/bu.)	5.28	5.68	5.33
Yield (bu./planted acre)	27.64	29.26	28.72

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Table 26A--Soybean production cash costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	121.52	139.61	136.20	137.72	141.46	126.71	107.55	116.58	186.06	140.45	127.05	149.64
Total, gross value of production	121.52	139.61	136.20	137.72	141.46	126.71	107.55	116.58	186.06	140.45	127.05	149.64
Cash expenses:												
Seed	7.44	10.43	7.54	7.25	9.96	10.11	9.90	9.71	9.68	11.70	9.69	10.16
Fertilizer, lime, and gypsum	20.14	20.59	21.80	20.25	18.97	14.26	12.66	12.42	15.19	25.61	23.12	22.49
Chemicals	16.95	18.75	21.00	22.11	22.86	14.40	14.04	13.53	13.94	18.37	19.50	21.44
Custom operations 1/	4.92	5.63	5.92	5.89	6.06	5.79	5.65	5.75	5.78	2.22	2.27	2.52
Fuel, lube, and electricity	13.48	13.23	12.60	10.96	8.98	11.87	7.21	8.85	8.85	9.57	10.24	11.28
Repairs	7.12	6.97	7.38	7.47	7.34	9.15	7.98	8.47	9.12	9.40	9.48	10.69
Hired labor	3.16	2.69	2.57	2.62	2.66	2.81	2.79	3.01	3.22	11.07	11.24	11.19
Other variable cash expenses 2/	0.00	0.07	0.24	0.21	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	73.21	78.36	79.05	76.76	77.05	68.39	60.23	61.47	65.78	87.94	85.54	89.77
General farm overhead	7.43	6.41	6.14	6.05	6.23	4.54	4.58	6.53	10.51	6.30	5.69	5.71
Taxes and insurance	5.34	4.91	4.89	5.10	5.40	6.74	6.92	7.25	7.41	10.33	8.69	8.14
Interest	17.37	20.81	23.26	20.45	19.38	13.75	11.04	10.46	14.60	5.47	6.26	6.52
Total, fixed cash expenses	30.14	32.13	34.29	31.60	31.01	25.03	22.54	24.24	32.52	22.10	20.64	20.37
Total, cash expenses	103.35	110.49	113.34	108.36	108.06	93.42	82.77	85.98	98.30	110.04	106.18	110.14
Gross value of production less cash expenses	18.17	29.12	22.86	29.36	33.40	33.29	24.78	30.60	87.76	30.41	20.87	39.50
Harvest-period price (dollars/bu.)	8.02	6.11	5.32	7.79	6.07	4.93	4.86	5.36	7.50	5.67	5.81	5.55
Yield (bu./planted acre)	15.14	22.84	25.61	17.67	23.29	25.70	22.13	21.73	24.79	24.77	21.88	26.94

Table 26B--Soybean production economic costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	121.52	139.61	136.20	137.72	141.46	126.71	107.55	116.58	186.06	140.45	127.05	149.64
Total, gross value of production	121.52	139.61	136.20	137.72	141.46	126.71	107.55	116.58	186.06	140.45	127.05	149.64
Economic (full ownership) costs:												
Variable cash expenses	73.21	78.36	79.05	76.76	77.05	68.39	60.23	61.74	65.78	87.94	85.54	89.77
General farm overhead	7.43	6.41	6.14	6.05	6.23	4.54	4.58	6.53	10.51	6.30	5.69	5.71
Taxes and insurance	5.34	4.91	4.89	5.10	5.40	6.74	6.92	7.25	7.41	10.33	8.69	8.14
Capital replacement	18.04	18.08	19.55	20.43	20.20	24.36	23.81	25.05	26.53	17.92	18.12	20.46
Operating capital	4.09	4.99	3.99	3.11	3.48	2.18	1.43	1.60	1.95	3.54	3.19	2.44
Other nonland capital	3.58	3.04	3.02	2.80	3.48	4.20	3.96	4.11	5.09	11.72	8.17	10.26
Land	29.08	30.91	28.24	27.03	27.79	25.04	23.00	22.05	30.02	23.81	24.20	29.80
Unpaid labor	11.91	10.13	9.66	9.88	9.04	10.56	10.51	11.33	12.10	13.60	14.33	15.63
Total, economic costs	152.68	156.82	154.54	151.16	153.19	146.01	134.44	139.66	159.39	175.16	167.93	182.21
Residual returns to management and risk	-31.16	-17.21	-18.34	-13.44	-11.73	-19.30	-26.89	-23.08	26.67	-34.71	-40.88	-32.57
Harvest-period price (dollars/bu.)	8.02	6.11	5.32	7.79	6.07	4.93	4.86	5.36	7.50	5.67	5.81	5.55
Yield (bu./planted acre)	15.14	22.84	25.61	17.67	23.29	25.70	22.13	21.73	24.79	24.77	21.88	26.94

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1985 and 1989.

Table 27A--Soybean production cash costs and returns, Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	129.08	129.83	132.54	158.68	154.29	121.93	88.26	115.91	184.85	120.27	139.45	151.05
Total, gross value of production	129.08	129.83	132.54	158.68	154.29	121.93	88.26	115.91	184.85	120.27	139.45	151.05
Cash expenses:												
Seed	7.87	12.94	8.08	7.67	10.78	11.37	9.31	10.10	10.75	11.11	10.48	9.43
Fertilizer, lime, and gypsum	8.17	9.70	9.71	5.33	6.25	6.84	6.06	6.94	7.99	6.08	5.45	5.36
Chemicals	16.74	18.57	19.75	20.82	21.03	8.54	8.53	8.30	8.49	18.47	19.34	21.51
Custom operations 1/	2.16	5.55	5.20	5.33	5.49	2.33	2.35	2.42	2.40	3.85	3.90	3.85
Fuel, lube, and electricity	15.61	13.51	12.85	11.01	8.82	12.58	7.40	9.63	9.73	11.27	13.06	14.63
Repairs	9.05	6.35	6.84	7.20	6.93	7.47	6.72	7.00	7.49	10.34	10.84	11.52
Hired labor	3.37	2.31	2.54	2.55	2.51	2.45	2.49	2.53	2.53	10.12	11.16	11.80
Other variable cash expenses 2/	0.00	0.43	1.00	0.86	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	62.97	69.36	65.98	60.77	62.71	51.58	42.86	46.02	49.38	71.24	74.23	78.10
General farm overhead	6.21	7.60	6.93	7.10	7.23	7.18	6.94	6.93	10.09	7.52	6.51	6.50
Taxes and insurance	5.00	4.34	4.33	4.69	5.10	7.67	7.94	8.30	8.54	9.18	6.99	6.52
Interest	15.87	18.12	22.39	14.48	18.36	13.64	10.14	11.16	9.96	8.64	9.35	9.13
Total, fixed cash expenses	27.08	30.06	33.65	26.27	30.69	28.49	25.02	26.39	28.59	25.34	22.85	22.15
Total, cash expenses	90.05	99.42	99.63	87.04	93.40	80.07	67.88	72.41	77.97	96.58	97.08	100.25
Gross value of production less cash expenses	39.03	30.41	32.91	71.64	60.89	41.86	20.38	43.50	106.88	23.69	42.37	50.80
Harvest-period price (dollars/bu.)	8.16	6.23	5.43	7.86	6.20	4.98	4.88	5.54	7.47	5.83	5.92	5.64
Yield (bu./planted acre)	15.82	20.84	24.40	20.20	24.88	24.47	18.10	20.93	24.74	20.63	23.54	26.77

Table 27B--Soybean production economic costs and returns, Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Soybeans	129.08	129.83	132.54	158.68	154.29	121.93	88.26	115.91	184.85	120.27	139.45	151.05
Total, gross value of production	129.08	129.83	132.54	158.68	154.29	121.93	88.26	115.91	184.85	120.27	139.45	151.05
Economic (full ownership) costs:												
Variable cash expenses	62.97	69.36	65.98	60.77	62.71	51.58	42.86	46.02	49.38	71.24	74.23	78.10
General farm overhead	6.21	7.60	6.93	7.10	7.23	7.18	6.94	6.93	10.09	7.52	6.51	6.50
Taxes and insurance	5.00	4.34	4.33	4.69	5.10	7.67	7.94	8.30	8.54	9.18	6.99	6.52
Capital replacement	21.22	20.13	21.32	22.56	22.72	27.80	27.94	28.66	30.56	20.84	22.34	24.08
Operating capital	3.60	4.38	3.42	2.39	2.88	1.74	1.08	1.28	1.54	2.86	2.77	2.12
Other nonland capital	4.06	3.21	3.26	3.11	3.85	4.87	4.73	5.45	5.99	12.84	9.34	11.21
Land	31.25	29.76	30.22	33.19	33.43	26.03	20.06	23.59	36.10	31.75	29.70	36.06
Unpaid labor	12.67	8.69	9.57	9.58	9.45	9.20	9.38	9.52	9.53	10.87	12.04	12.03
Total, economic costs	146.98	147.47	145.03	143.39	147.37	136.07	120.93	129.11	151.74	167.10	163.92	176.62
Residual returns to management and risk	-17.90	-17.64	-12.49	15.29	6.92	-14.14	-32.67	-13.20	33.11	-46.83	-24.47	-25.57
Harvest-period price (dollars/bu.)	8.16	6.23	5.43	7.86	6.20	4.98	4.88	5.54	7.47	5.83	5.92	5.64
Yield (bu./planted acre)	15.82	20.84	24.40	20.20	24.88	24.47	18.10	20.93	24.74	20.63	23.54	26.77

1/ Includes cost of technical service. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1985 and 1989.

Figure 17

Rice Production Regions



Figure 18

Rice production economic costs per planted acre, including direct Government payments and participation costs, 1991

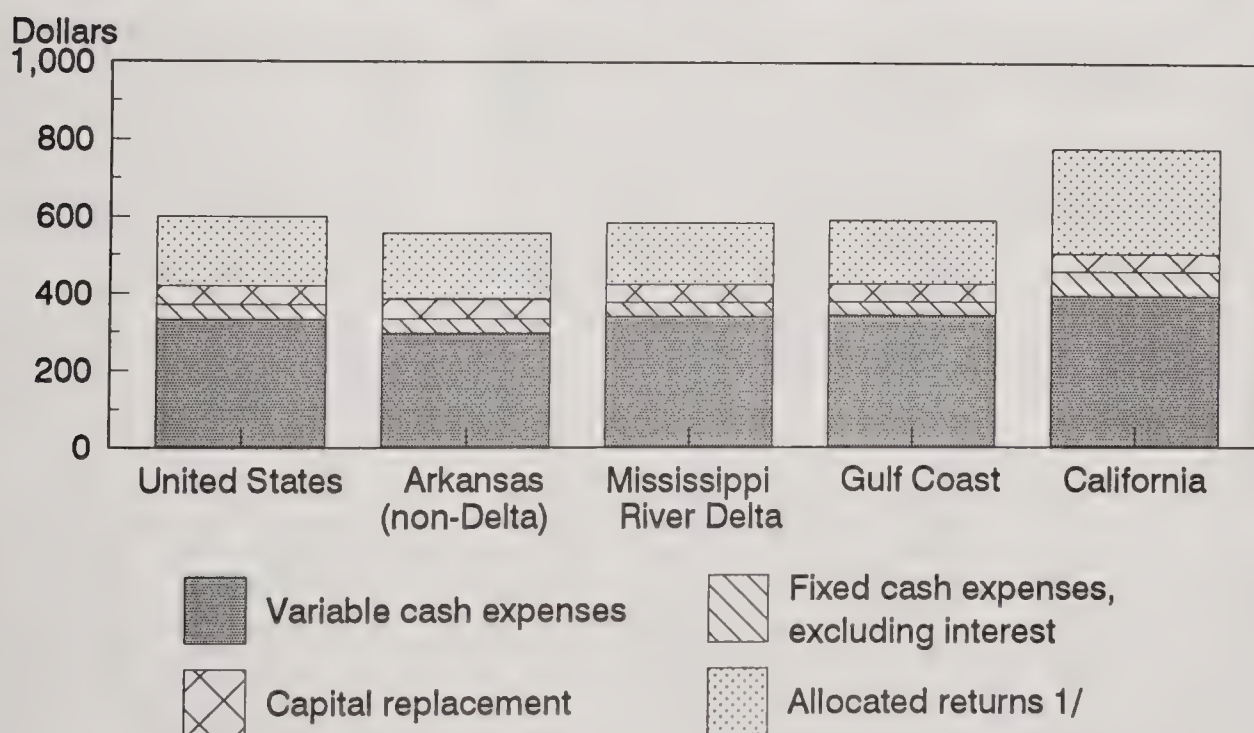


Table 28A--U.S. rice production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	462.37	487.67	356.65	400.12	393.22	430.71	218.41	263.89	366.85	415.64	319.42	407.88
Total, gross value of production	462.37	487.67	356.65	400.12	393.22	430.71	218.41	263.89	366.85	415.64	319.42	407.88
Cash expenses:												
Seed	28.94	29.95	26.10	25.89	25.51	24.21	19.89	21.01	21.22	21.43	21.51	20.42
Fertilizer	36.04	38.85	37.78	35.51	35.61	34.06	35.34	30.96	35.45	38.43	35.59	34.26
Chemicals	22.93	25.08	26.63	28.04	5.51	5.69	42.06	39.08	39.21	40.60	42.59	46.99
Custom operations 1/	29.14	32.15	33.36	34.08	53.16	53.12	37.81	37.51	32.62	34.71	35.53	37.19
Fuel, lube, and electricity	43.41	49.83	50.48	46.45	38.72	44.56	37.53	47.10	55.19	58.11	64.23	68.91
Repairs	18.27	19.59	21.01	22.24	28.23	28.72	22.24	23.34	26.78	28.32	30.01	31.13
Hired labor	18.52	19.38	20.86	20.79	25.35	26.09	39.34	39.09	34.70	35.92	38.55	40.12
Drying	29.30	35.78	36.30	35.29	32.04	34.67	43.32	39.08	39.02	40.80	40.20	41.80
Other variable cash expenses 2/	7.91	7.66	20.03	20.10	20.45	20.29	9.68	8.76	8.07	8.48	8.33	9.49
Total, variable cash expenses	234.46	258.27	272.55	268.39	264.58	271.41	287.21	285.93	292.26	306.80	316.54	330.31
General farm overhead	27.95	25.99	23.40	23.08	23.67	26.08	20.77	20.28	21.60	20.97	23.96	22.21
Taxes and insurance	9.86	9.55	9.96	10.47	12.26	13.21	11.24	12.02	12.01	12.43	12.57	12.65
Interest	62.55	61.57	58.23	49.38	54.02	52.40	35.10	26.05	24.71	25.75	27.81	26.72
Total, fixed cash expenses	100.36	97.11	91.59	82.93	89.95	91.69	67.11	58.35	58.32	59.15	64.34	61.58
Total, cash expenses	334.82	355.38	364.14	351.32	354.53	363.10	354.32	344.28	350.58	365.95	380.88	391.89
Gross value of production less cash expenses	127.55	132.29	-7.49	48.80	38.69	67.61	-135.91	-80.39	16.27	49.69	-61.46	15.99
Harvest-period price (dollars/cwt.)	10.69	10.21	7.61	8.79	8.05	8.01	3.83	4.83	6.82	7.45	6.06	7.52
Yield (cwt./planted acre)	43.24	47.75	46.86	45.53	48.87	53.78	56.97	54.67	53.79	55.79	52.71	54.24

Table 28B--U.S. rice production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	462.37	487.67	356.65	400.12	393.22	430.71	218.41	263.89	366.85	415.64	319.42	407.88
Total, gross value of production	462.37	487.67	356.65	400.12	393.22	430.71	218.41	263.89	366.85	415.64	319.42	407.88
Economic (full ownership) costs:												
Variable cash expenses	234.46	258.27	272.55	268.39	264.58	271.41	287.21	285.93	292.26	306.80	316.54	330.31
General farm overhead	27.95	25.99	23.40	23.08	23.67	26.08	20.77	20.28	21.60	20.97	23.96	22.21
Taxes and insurance	9.86	9.55	9.96	10.47	12.26	13.21	11.24	12.02	12.01	12.43	12.57	12.65
Capital replacement	40.15	42.94	45.27	47.94	49.71	51.44	40.69	44.27	41.54	43.81	45.76	47.79
Operating capital	8.40	11.00	8.89	6.78	7.88	6.18	5.01	5.65	10.11	12.33	11.82	8.98
Other nonland capital	7.76	7.51	7.62	7.31	10.12	10.03	7.65	8.01	16.70	20.17	22.21	24.72
Land	87.84	92.13	53.80	65.00	68.86	75.74	25.59	34.24	61.89	72.78	48.67	65.24
Unpaid labor	12.87	13.47	14.50	14.44	17.62	18.13	23.20	23.54	22.88	23.95	25.20	27.33
Total, economic costs	429.29	460.86	435.99	443.42	454.70	472.21	421.36	433.94	478.99	513.14	506.73	539.23
Residual returns to management and risk	33.08	26.81	-79.34	-43.30	-61.48	-41.50	-202.95	-170.05	-112.14	-97.50	-187.31	-131.35
Harvest-period price (dollars/cwt.)	10.69	10.21	7.61	8.79	8.05	8.01	3.83	4.83	6.82	7.45	6.06	7.52
Yield (cwt./planted acre)	43.24	47.75	46.86	45.53	48.87	53.78	56.97	54.67	53.79	55.79	52.71	54.24

1/ Includes cost for technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1984 and 1986.

Table 28C--U.S. rice production cash costs and returns, including direct Government payments and program participation costs, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	366.85	415.64	319.42	407.88
Direct Government payments	219.81	232.32	247.42	201.06
Total, gross value of production	586.66	647.96	566.84	608.94
Cash expenses:				
Seed	21.22	21.43	21.51	20.42
Fertilizer	35.45	38.43	35.59	34.26
Chemicals	39.23	40.62	42.61	47.01
Custom operations 1/	32.62	34.71	35.53	37.19
Fuel, lube, and electricity	55.67	58.60	64.80	69.54
Repairs	28.09	29.69	31.46	32.61
Hired labor	34.88	36.10	38.75	40.32
Drying	39.02	40.80	40.20	41.80
Other variable cash expenses 2/	8.12	8.54	8.38	9.54
Total, variable cash expenses	294.30	308.92	318.83	332.69
General farm overhead	24.76	24.04	27.53	25.36
Taxes and insurance	14.14	15.06	14.93	13.79
Interest	28.40	29.60	32.02	30.57
Total, fixed cash expenses	67.30	68.70	74.48	69.72
Total, cash expenses	361.60	377.62	393.31	402.41
Gross value of production less cash expenses	225.06	270.34	173.53	206.53
Harvest-period price (dollars/cwt.)	6.82	7.45	6.06	7.52
Yield (cwt./planted acre)	53.79	55.79	52.71	54.24

Table 28D--U.S. rice production economic costs and returns, including direct Government payments and program participation costs, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	366.85	415.64	319.42	407.88
Direct Government payments	219.81	232.32	247.42	201.06
Total, gross value of production	586.66	647.96	566.84	608.94
Economic (full ownership) costs:				
Variable cash expenses	294.30	308.92	318.83	332.69
General farm overhead	24.76	24.04	27.53	25.36
Taxes and insurance	14.14	15.06	14.93	13.79
Capital replacement	42.14	44.44	46.43	48.48
Operating capital	10.18	12.42	11.91	9.05
Other nonland capital	17.14	20.71	22.79	25.36
Land	115.90	131.34	110.19	118.26
Unpaid labor	23.02	24.09	25.36	27.49
Total, economic costs	541.58	581.02	577.97	600.48
Residual returns to management and risk	45.08	66.94	-11.13	8.46
Harvest-period price (dollars/cwt.)	6.82	7.45	6.06	7.52
Yield (cwt./planted acre)	53.79	55.79	52.71	54.24

1/ Includes cost for technical services. 2/ Includes cost for purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 29A--Rice production cash costs and returns, Arkansas (non-Delta), 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice												
Total, gross value of production	426.21	450.74	333.63	381.21	379.02	445.69	208.79	263.71	370.69	420.14	300.41	400.32
	426.21	450.74	333.63	381.21	379.02	445.69	208.79	263.71	370.69	420.14	300.41	400.32
Cash expenses:												
Seed	31.74	31.82	24.95	27.43	26.75	21.78	18.72	19.98	19.06	19.46	19.60	16.44
Fertilizer	34.51	36.74	36.00	32.08	27.89	27.11	31.39	27.50	32.06	34.68	31.64	28.13
Chemicals	21.61	23.59	25.40	26.69	1.21	1.21	32.67	31.90	32.41	33.69	35.47	38.53
Custom operations 1/	21.63	24.54	25.40	26.22	42.20	41.79	29.62	30.43	25.31	26.98	27.82	28.49
Fuel, lube, and electricity	45.45	54.48	52.82	48.61	46.28	54.54	38.23	50.77	58.97	62.55	70.15	75.70
Repairs	17.42	18.63	19.91	21.14	32.25	33.08	28.10	28.33	28.73	30.40	31.92	33.36
Hired labor	19.12	19.49	22.19	21.20	27.03	26.85	35.18	34.94	32.40	33.60	37.30	40.53
Drying	29.99	35.89	34.12	33.78	20.73	23.31	33.99	32.70	32.63	34.90	31.83	32.41
Other variable cash expenses 2/	1.07	1.07	0.00	0.00	0.00	0.00	1.33	1.32	1.33	1.37	1.42	1.44
Total, variable cash expenses	222.54	246.25	240.79	237.15	224.34	229.67	249.23	257.87	262.90	277.63	287.15	295.03
General farm overhead	25.38	24.04	17.37	17.25	17.78	26.25	16.61	16.22	18.35	17.81	20.62	18.72
Taxes and insurance	7.74	8.02	8.25	8.84	11.27	12.16	12.74	13.29	12.69	13.10	13.30	13.47
Interest	64.80	57.29	56.08	35.18	45.16	49.87	33.02	24.84	26.33	27.40	30.08	28.69
Total, fixed cash expenses	97.92	89.35	81.70	61.27	74.21	88.28	62.37	54.35	57.37	58.31	64.00	60.88
Total, cash expenses	320.46	335.60	322.49	298.42	298.55	317.95	311.60	312.22	320.27	335.94	351.15	355.91
Gross value of production less cash expenses	105.75	115.14	11.14	82.79	80.97	127.74	-102.81	-48.51	50.42	84.20	-50.74	44.41
Harvest-period price (dollars/cwt.)	10.30	9.95	7.74	8.93	8.19	8.57	3.87	4.92	6.93	7.52	6.08	7.70
Yield (cwt./planted acre)	41.38	45.30	43.10	42.69	46.28	52.01	53.95	53.60	53.49	55.87	49.41	51.99

Table 29B--Rice production economic costs and returns, Arkansas (non-Delta), 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice												
Total, gross value of production	426.21	450.74	333.63	381.21	379.02	445.69	208.79	263.71	370.69	420.14	300.41	400.32
	426.21	450.74	333.63	381.21	379.02	445.69	208.79	263.71	370.69	420.14	300.41	400.32
Economic (full ownership) costs:												
Variable cash expenses	222.54	246.25	240.79	237.15	224.34	229.67	249.23	257.87	262.90	277.63	287.15	295.03
General farm overhead	25.38	24.04	17.37	17.25	17.78	26.25	16.61	16.22	18.35	17.81	20.62	18.72
Taxes and insurance	7.74	8.02	8.25	8.84	11.27	12.16	12.74	13.29	12.69	13.10	13.30	13.47
Capital replacement	38.12	40.16	41.70	44.32	56.15	57.58	60.45	60.94	45.50	47.81	49.44	51.66
Operating capital	7.77	10.16	8.05	6.34	6.86	5.33	4.59	5.27	9.10	11.16	10.73	8.02
Other nonland capital	7.58	7.24	7.30	7.02	10.97	10.72	10.59	10.49	17.85	21.53	23.65	26.40
Land	87.63	90.61	53.92	67.27	78.15	94.90	15.84	29.01	58.62	69.63	40.30	63.07
Unpaid labor	13.29	13.54	15.42	14.74	18.78	18.66	16.30	16.19	16.87	17.48	19.42	21.10
Total, economic costs	410.05	440.02	392.80	402.93	424.30	455.27	386.35	409.28	441.88	476.15	464.61	497.47
Residual returns to management and risk	16.16	10.72	-59.17	-21.72	-45.28	-9.58	-177.56	-145.57	-71.19	-56.01	-164.20	-97.15
Harvest-period price (dollars/cwt.)	10.30	9.95	7.74	8.93	8.19	8.57	3.87	4.92	6.93	7.52	6.08	7.70
Yield (cwt./planted acre)	41.38	45.30	43.10	42.69	46.28	52.01	53.95	53.60	53.49	55.87	49.41	51.99

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 29C--Rice production cash costs and returns including direct Government payments and program participation costs, Arkansas (non-Delta), 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	370.69	420.14	300.41	400.32
Direct Government payments	213.48	226.99	235.78	179.49
Total, gross value of production	584.17	647.13	536.19	579.81
Cash expenses:				
Seed	19.06	19.46	19.60	16.44
Fertilizer	32.06	34.68	31.64	28.13
Chemicals	32.41	33.69	35.47	38.53
Custom operations 1/	25.31	26.98	27.82	28.49
Fuel, lube, and electricity	59.35	62.95	70.63	76.23
Repairs	29.97	31.70	33.29	34.79
Hired labor	32.56	33.76	37.47	40.71
Drying	32.63	34.90	31.83	32.41
Other variable cash expenses 2/	1.42	1.47	1.51	1.53
Total, variable cash expenses	264.77	279.59	289.26	297.26
General farm overhead	22.02	21.37	24.74	22.46
Taxes and insurance	14.38	15.12	15.00	13.91
Interest	31.39	32.66	35.85	34.20
Total, fixed cash expenses	67.79	69.15	75.59	70.57
Total, cash expenses	332.56	348.74	364.85	367.83
Gross value of production less cash expenses	251.61	298.39	171.34	211.98
Harvest-period price (dollars/cwt.)	6.93	7.52	6.08	7.70
Yield (cwt./planted acre)	53.49	55.87	49.41	51.99

Table 29D--Rice production economic costs and returns including direct Government payments and program participation costs, Arkansas (non-Delta), 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	370.69	420.14	300.41	400.32
Direct Government payments	213.48	226.99	235.78	179.49
Total, gross value of production	584.17	647.13	536.19	579.81
Economic (full ownership) costs:				
Variable cash expenses	264.77	279.59	289.26	297.26
General farm overhead	22.02	21.37	24.74	22.46
Taxes and insurance	14.38	15.12	15.00	13.91
Capital replacement	46.01	48.35	50.01	52.26
Operating capital	9.16	11.24	10.80	8.09
Other nonland capital	18.23	21.99	24.16	26.97
Land	118.03	132.87	103.24	114.94
Unpaid labor	16.99	17.61	19.56	21.25
Total, economic costs	509.59	548.14	536.77	557.14
Residual returns to management and risk	74.58	98.99	-0.58	22.67
Harvest-period price (dollars/cwt.)	6.93	7.52	6.08	7.70
Yield (cwt./planted acre)	53.49	55.87	49.41	51.99

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 30A--Rice production cash costs and returns, Mississippi River Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	372.28	441.71	307.97	353.60	344.73	396.26	202.77	239.94	351.65	399.69	304.53	373.86
Total, gross value of production	372.28	441.71	307.97	353.60	344.73	396.26	202.77	239.94	351.65	399.69	304.53	373.86
Cash expenses:												
Seed	30.58	30.58	23.91	26.27	23.48	23.48	17.83	19.01	20.76	20.82	20.85	19.03
Fertilizer	26.96	30.75	28.57	29.87	39.61	37.62	31.57	26.00	31.47	34.35	33.27	30.20
Chemicals	27.04	29.44	31.55	33.14	12.87	12.87	46.46	45.37	46.10	47.92	50.46	54.81
Custom operations 1/	26.42	29.78	30.90	31.93	54.86	55.94	38.52	39.55	37.92	40.44	41.70	42.70
Fuel, lube, and electricity	43.54	52.07	52.77	47.20	43.98	48.54	29.37	39.75	53.53	56.07	63.25	67.96
Repairs	15.16	16.29	17.53	18.66	23.02	22.87	22.00	21.84	29.00	30.73	32.46	33.92
Hired labor	16.33	17.05	16.92	17.82	20.16	20.42	38.88	38.62	38.39	39.81	44.19	46.28
Drying	26.73	32.08	30.38	30.24	26.18	30.58	39.93	36.13	40.15	43.03	41.59	39.95
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	1.74	1.73	1.75	1.83	1.89	1.92
Total, variable cash expenses	212.76	238.04	232.53	235.13	243.17	252.32	266.30	268.00	299.07	315.00	329.66	336.77
General farm overhead	22.07	22.23	15.99	16.41	16.37	23.34	19.55	19.08	19.61	19.03	22.03	20.00
Taxes and insurance	6.88	6.88	8.82	8.03	10.33	11.35	10.70	10.83	10.36	10.60	10.76	10.82
Interest	52.51	52.97	51.63	33.47	41.58	44.34	24.11	17.64	17.29	17.73	19.29	18.40
Total, fixed cash expenses	81.46	82.08	76.44	57.91	68.28	79.03	54.36	47.55	47.26	47.36	52.08	49.22
Total, cash expenses	294.22	320.12	308.97	293.04	311.45	331.35	320.66	315.55	346.33	362.36	381.74	385.99
Gross value of production less cash expenses	78.06	121.59	-1.00	60.56	33.28	64.91	-117.89	-75.61	5.32	37.33	-77.21	-12.13
Harvest-period price (dollars/cwt.)	10.13	10.43	7.68	8.86	8.03	7.90	3.91	4.98	6.94	7.53	6.12	7.68
Yield (cwt./planted acre)	36.75	42.35	40.10	39.91	42.93	50.16	51.86	48.18	50.67	53.08	49.76	48.68

Table 30B--Rice production economic costs and returns, Mississippi River Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	372.28	441.71	307.97	353.60	344.73	396.26	202.77	239.94	351.65	399.69	304.53	373.86
Total, gross value of production	372.28	441.71	307.97	353.60	344.73	396.26	202.77	239.94	351.65	399.69	304.53	373.86
Economic (full ownership) costs:												
Variable cash expenses	212.76	238.04	232.53	235.13	243.17	252.32	266.30	268.00	299.07	315.00	329.66	336.77
General farm overhead	22.07	22.23	15.99	16.41	16.37	23.34	19.55	19.08	19.61	19.03	22.03	20.00
Taxes and insurance	6.88	6.88	8.82	8.03	10.33	11.35	10.70	10.83	10.36	10.60	10.76	10.82
Capital replacement	35.36	37.45	38.96	41.43	45.11	46.38	40.29	40.19	39.64	41.86	43.75	45.72
Operating capital	7.43	9.91	7.76	5.42	6.80	5.34	4.79	5.43	10.35	12.66	12.31	9.16
Other nonland capital	7.00	6.73	6.81	6.56	10.03	9.96	7.81	7.64	15.87	19.18	21.12	23.58
Land	63.50	77.69	38.33	48.93	47.91	50.89	21.68	26.06	60.68	71.45	48.61	61.85
Unpaid labor	11.35	11.85	11.75	12.38	14.01	14.19	14.75	14.65	15.26	15.82	17.57	18.40
Total, economic costs	366.35	410.78	360.95	374.29	393.73	413.77	385.87	391.88	470.84	505.60	505.81	526.30
Residual returns to management and risk	5.93	30.93	-52.98	-20.69	-49.00	-17.51	-183.10	-151.94	-119.19	-105.91	-201.28	-152.44
Harvest-period price (dollars/cwt.)	10.13	10.43	7.68	8.86	8.03	7.90	3.91	4.98	6.94	7.53	6.12	7.68
Yield (cwt./planted acre)	36.75	42.35	40.10	39.91	42.93	50.16	51.86	48.18	50.67	53.08	49.76	48.68

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1984 and 1986.

Table 30C--Rice production cash costs and returns including direct
Government payments and program participation costs,
Delta, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	351.65	399.69	304.53	373.86
Direct Government payments	193.42	202.97	210.25	180.24
Total, gross value of production	545.07	602.66	514.78	554.10
Cash expenses:				
Seed	20.76	20.82	20.85	19.03
Fertilizer	31.47	34.35	33.27	30.20
Chemicals	46.12	47.94	50.48	54.84
Custom operations 1/	37.92	40.44	41.70	42.70
Fuel, lube, and electricity	54.25	56.79	64.10	68.88
Repairs	31.51	33.38	35.23	36.82
Hired labor	38.67	40.10	44.51	46.61
Drying	40.15	43.03	41.59	39.95
Other variable cash expenses 2/	1.75	1.83	1.89	1.92
Total, variable cash expenses	302.60	318.68	333.62	340.95
General farm overhead	23.39	22.70	26.27	23.85
Taxes and insurance	12.23	12.93	12.63	11.50
Interest	20.49	21.02	22.88	21.83
Total, fixed cash expenses	56.11	56.65	61.78	57.18
Total, cash expenses	358.71	375.33	395.40	398.13
Gross value of production less cash expenses	186.36	227.33	119.38	155.97
Harvest-period price (dollars/cwt.)	6.94	7.53	6.12	7.68
Yield (cwt./planted acre)	50.67	53.08	49.76	48.68

Table 30D--Rice production economic costs and returns including direct
Government payments and program participation costs,
Delta, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	351.65	399.69	304.53	373.86
Direct Government payments	193.42	202.97	210.25	180.24
Total, gross value of production	545.07	602.66	514.78	554.10
Economic (full ownership) costs:				
Variable cash expenses	302.60	318.68	333.62	340.95
General farm overhead	23.39	22.70	26.27	23.85
Taxes and insurance	12.23	12.93	12.63	11.50
Capital replacement	40.58	42.86	44.80	46.82
Operating capital	10.47	12.81	12.46	9.27
Other nonland capital	16.54	19.99	22.00	24.56
Land	107.87	123.76	97.48	109.20
Unpaid labor	15.42	15.99	17.76	18.60
Total, economic costs	529.10	569.72	567.02	584.75
Residual returns to management and risk	15.97	32.94	-52.24	-30.65
Harvest-period price (dollars/cwt.)	6.94	7.53	6.12	7.68
Yield (cwt./planted acre)	50.67	53.08	49.76	48.68

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 31A--Rice production cash costs and returns, Gulf Coast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	431.64	466.07	345.07	363.62	371.69	384.13	203.13	247.68	355.79	367.08	326.98	400.73
Total, gross value of production	431.64	466.07	345.07	363.62	371.69	384.13	203.13	247.68	355.79	367.08	326.98	400.73
Cash expenses:												
Seed	26.98	27.01	26.11	24.74	25.14	26.35	21.90	23.23	24.76	24.98	25.10	24.63
Fertilizer	40.37	45.27	42.61	39.59	40.05	38.74	40.36	36.42	43.15	47.24	41.91	43.04
Chemicals	22.70	24.49	25.57	27.07	4.45	4.52	40.08	38.83	39.78	41.03	43.02	46.75
Custom operations 1/	27.71	30.34	30.89	31.72	56.71	56.42	34.18	35.00	32.42	34.40	35.36	35.98
Fuel, lube, and electricity	50.54	53.75	57.31	52.70	32.84	36.49	41.33	46.83	50.82	52.11	57.48	64.03
Repairs	20.03	22.05	23.39	24.77	25.20	25.29	19.58	19.62	23.88	25.14	26.71	28.46
Hired labor	19.51	21.69	23.25	23.32	18.64	26.31	41.34	41.62	32.62	33.15	33.81	33.50
Drying	26.03	33.54	35.73	32.67	41.31	44.24	46.80	43.70	44.41	42.01	47.14	47.74
Other variable cash expenses 2/	13.74	14.56	53.96	54.15	55.09	54.65	17.34	16.82	18.29	18.97	19.02	18.59
Total, variable cash expenses	247.61	272.70	318.81	310.74	299.43	313.01	302.91	302.07	310.13	319.03	329.55	342.72
General farm overhead	27.30	24.70	18.78	18.85	19.26	20.68	18.72	18.27	21.78	20.88	23.99	21.50
Taxes and insurance	9.04	8.34	9.06	9.98	9.63	10.49	8.89	9.58	10.44	10.61	10.81	10.88
Interest	47.46	59.13	51.88	42.30	44.57	39.22	29.14	21.14	20.64	21.00	22.75	21.86
Total, fixed cash expenses	83.80	92.17	79.72	71.13	73.46	70.39	56.75	48.99	52.86	52.49	57.55	54.24
Total, cash expenses	331.41	364.87	398.53	381.87	372.89	383.40	359.66	351.06	362.99	371.52	387.10	396.96
Gross value of production less cash expenses	100.23	101.20	-53.46	-18.25	-1.20	0.73	-156.53	-103.38	-7.20	-4.44	-60.12	3.77
Harvest-period price (dollars/cwt.)	11.24	10.64	7.77	8.98	8.23	7.94	3.86	4.89	7.03	7.63	6.27	7.69
Yield (cwt./planted acre)	38.40	43.82	44.40	40.48	45.15	48.36	52.65	50.63	50.61	48.11	52.15	52.11

Table 31B--Rice production economic costs and returns, Gulf Coast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	431.64	466.07	345.07	363.62	371.69	384.13	203.13	247.68	355.79	367.08	326.98	400.73
Total, gross value of production	431.64	466.07	345.07	363.62	371.69	384.13	203.13	247.68	355.79	367.08	326.98	400.73
Economic (full ownership) costs:												
Variable cash expenses	247.61	272.70	318.81	310.74	299.43	313.01	302.91	302.07	310.13	319.03	329.55	342.72
General farm overhead	27.30	24.70	18.78	18.85	19.26	20.68	18.72	18.27	21.78	20.88	23.99	21.50
Taxes and insurance	9.04	8.34	9.06	9.98	9.63	10.49	8.89	9.58	10.44	10.61	10.81	10.88
Capital replacement	45.47	50.21	53.10	56.13	39.80	41.09	33.84	33.90	38.10	40.04	42.14	45.39
Operating capital	9.53	12.68	10.37	8.10	8.67	6.90	4.71	5.32	10.73	12.83	12.31	9.32
Other nonland capital	8.63	8.55	8.64	8.27	8.22	8.13	6.55	6.44	15.95	19.22	21.11	23.89
Land	66.59	74.02	39.01	43.73	52.70	55.72	9.11	17.35	46.40	50.79	40.76	51.63
Unpaid labor	13.55	15.08	16.15	16.21	22.92	18.29	27.95	28.32	29.34	30.47	32.34	32.69
Total, economic costs	427.71	466.28	473.93	472.00	460.63	474.31	412.68	421.25	482.87	503.87	513.01	538.02
Residual returns to management and risk	3.93	-0.21	-128.86	-108.38	-88.94	-90.18	-209.55	-173.57	-127.08	-136.79	-186.03	-137.29
Harvest-period price (dollars/cwt.)	11.24	10.64	7.77	8.98	8.23	7.94	3.86	4.89	7.03	7.63	6.27	7.69
Yield (cwt./planted acre)	38.40	43.82	44.40	40.48	45.15	48.36	52.65	50.63	50.61	48.11	52.15	52.11

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1984 and 1986.

Table 31C--Rice production cash costs and returns including direct
Government payments and program participation costs,
Gulf Coast, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	355.79	367.08	326.98	400.73
Direct Government payments	209.06	223.06	249.10	194.29
Total, gross value of production	564.85	590.14	576.08	595.02
Cash expenses:				
Seed	24.76	24.98	25.10	24.63
Fertilizer	43.15	47.24	41.91	43.04
Chemicals	39.79	41.04	43.03	46.75
Custom operations 1/	32.42	34.40	35.36	35.98
Fuel, lube, and electricity	51.29	52.56	58.00	64.65
Repairs	24.61	25.90	27.50	29.28
Hired labor	32.78	33.31	33.97	33.65
Drying	44.41	42.01	47.14	47.74
Other variable cash expenses 2/	18.31	18.99	19.04	18.62
Total, variable cash expenses	311.52	320.43	331.05	344.34
General farm overhead	23.67	22.73	26.14	23.43
Taxes and insurance	12.64	13.56	13.46	12.09
Interest	22.40	22.82	24.75	23.76
Total, fixed cash expenses	58.71	59.11	64.35	59.28
Total, cash expenses	370.23	379.54	395.40	403.62
Gross value of production less cash expenses	194.62	210.60	180.68	191.40
Harvest-period price (dollars/cwt.)	7.03	7.63	6.27	7.69
Yield (cwt./planted acre)	50.61	48.11	52.15	52.11

Table 31D--Rice production economic costs and returns including direct
Government payments and program participation costs,
Gulf Coast, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	355.79	367.08	326.98	400.73
Direct Government payments	209.06	223.06	249.10	194.29
Total, gross value of production	564.85	590.14	576.08	595.02
Economic (full ownership) costs:				
Variable cash expenses	311.52	320.43	331.05	344.34
General farm overhead	23.67	22.73	26.14	23.43
Taxes and insurance	12.64	13.56	13.46	12.09
Capital replacement	38.61	40.58	42.71	45.97
Operating capital	10.78	12.88	12.36	9.37
Other nonland capital	16.34	19.68	21.62	24.44
Land	91.45	100.94	98.20	100.10
Unpaid labor	29.49	30.62	32.50	32.85
Total, economic costs	534.50	561.42	578.04	592.59
Residual returns to management and risk	30.35	28.72	-1.96	2.43
Harvest-period price (dollars/cwt.)	7.03	7.63	6.27	7.69
Yield (cwt./planted acre)	50.61	48.11	52.15	52.11

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 32A--Rice production cash costs and returns, California, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	697.05	671.87	489.34	582.15	534.86	531.88	281.84	316.19	412.87	515.91	401.41	513.93
Total, gross value of production	697.05	671.87	489.34	582.15	534.86	531.88	281.84	316.19	412.87	515.91	401.41	513.93
Cash expenses:												
Seed	25.79	30.68	31.33	24.15	26.56	26.56	21.09	21.59	22.01	22.06	22.09	24.80
Fertilizer	41.48	43.66	45.35	43.52	37.38	34.70	37.26	34.37	38.63	41.07	41.89	39.23
Chemicals	20.60	22.41	24.03	25.24	6.00	6.00	49.12	47.96	48.74	50.66	53.34	57.94
Custom operations 1/	48.54	54.32	56.50	59.17	66.62	66.05	48.35	49.63	49.38	52.67	54.31	55.62
Fuel, lube, and electricity	25.76	29.88	30.54	28.50	26.82	32.28	43.49	47.51	54.85	59.08	58.40	62.15
Repairs	20.16	22.00	23.69	25.15	34.65	34.53	20.57	20.58	21.44	22.80	24.49	25.59
Hired labor	18.24	18.50	19.55	19.41	30.92	32.65	41.37	44.08	40.36	42.86	42.61	43.08
Drying	37.62	45.43	49.72	51.26	46.04	47.33	53.47	47.89	48.03	55.59	55.09	59.15
Other variable cash expenses 2/	18.37	19.81	24.32	24.41	24.83	24.63	22.92	23.13	23.05	25.05	25.82	26.12
Total, variable cash expenses	256.56	286.69	305.03	300.80	299.82	304.73	337.64	336.74	346.49	371.84	378.04	393.68
General farm overhead	41.00	38.03	53.59	54.13	55.16	39.09	35.78	34.93	37.92	36.81	42.60	38.67
Taxes and insurance	18.85	18.96	16.44	18.68	22.28	22.78	14.50	14.65	16.80	17.66	18.10	17.93
Interest	100.39	87.87	82.97	118.12	108.99	92.12	68.53	51.43	44.44	46.27	50.82	48.48
Total, fixed cash expenses	160.24	144.86	153.00	190.93	186.43	153.99	118.81	101.01	99.16	100.74	111.52	105.08
Total, cash expenses	416.80	431.55	458.03	491.73	486.25	458.72	456.45	437.75	445.65	472.58	489.56	498.76
Gross value of production less cash expenses	280.25	240.32	31.31	90.42	48.61	73.16	-174.61	-121.56	-32.78	43.33	-88.15	15.17
Harvest-period price (dollars/cwt.)	10.90	9.85	7.21	8.32	7.63	7.38	3.69	4.49	5.95	6.61	5.35	6.69
Yield (cwt./planted acre)	63.95	68.21	67.87	69.97	70.10	72.07	76.38	70.42	69.39	78.05	75.03	76.82

Table 32B--Rice production economic costs and returns, California, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Rice	697.05	671.87	489.34	582.15	534.86	531.88	281.84	316.19	412.87	515.91	401.41	513.93
Total, gross value of production	697.05	671.87	489.34	582.15	534.86	531.88	281.84	316.19	412.87	515.91	401.41	513.93
Economic (full ownership) costs:												
Variable cash expenses	256.56	286.69	305.03	300.80	299.82	304.73	337.64	336.74	346.49	371.84	378.04	393.68
General farm overhead	41.00	38.03	53.59	54.13	55.16	39.09	35.78	34.93	37.92	36.81	42.60	38.67
Taxes and insurance	18.85	18.96	16.44	18.68	22.28	22.78	14.50	14.65	16.80	17.66	18.10	17.93
Capital replacement	39.27	43.49	46.87	49.75	62.22	64.34	30.70	30.71	38.83	41.21	43.99	45.97
Operating capital	8.51	11.23	9.44	7.27	10.05	7.93	6.36	7.24	11.99	14.95	14.12	10.71
Other nonland capital	7.34	7.35	7.56	7.26	12.22	11.97	5.95	5.84	15.89	19.24	21.36	23.85
Land	159.63	150.95	101.71	125.29	111.15	108.62	72.03	81.70	114.12	135.18	104.44	111.14
Unpaid labor	12.68	12.85	13.58	13.48	21.49	22.68	42.25	44.21	46.99	49.90	49.61	50.16
Total, economic costs	543.84	569.54	554.22	576.67	594.39	582.14	545.21	556.02	629.03	686.79	672.26	692.11
Residual returns to management and risk	153.21	102.33	-64.88	5.48	-59.53	-50.26	-263.37	-239.83	-216.16	-170.88	-270.85	-178.18
Harvest-period price (dollars/cwt.)	10.90	9.85	7.21	8.32	7.63	7.38	3.69	4.49	5.95	6.61	5.35	6.69
Yield (cwt./planted acre)	63.95	68.21	67.87	69.97	70.10	72.07	76.38	70.42	69.39	78.05	75.03	76.82

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Table 32C--Rice production cash costs and returns including direct
Government payments and program participation costs,
California, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	412.87	515.91	401.41	513.93
Direct Government payments	327.26	331.86	379.55	322.03
Total, gross value of production	740.13	847.77	780.96	835.96
Cash expenses:				
Seed	22.01	22.06	22.09	24.80
Fertilizer	38.63	41.07	41.89	39.23
Chemicals	48.85	50.77	53.46	58.07
Custom operations 1/	49.41	52.70	54.34	55.65
Fuel, lube, and electricity	55.18	59.46	58.78	62.57
Repairs	21.81	23.20	24.92	26.04
Hired labor	40.49	43.00	42.74	43.21
Drying	48.03	55.59	55.09	59.15
Other variable cash expenses 2/	23.15	25.15	25.92	26.22
Total, variable cash expenses	347.56	373.00	379.23	394.94
General farm overhead	40.79	39.58	45.82	41.59
Taxes and insurance	20.16	21.40	22.31	21.91
Interest	48.58	50.56	55.51	52.95
Total, fixed cash expenses	109.53	111.54	123.64	116.45
Total, cash expenses	457.09	484.54	502.87	511.39
Gross value of production less cash expenses	283.04	363.23	278.09	324.57
Harvest-period price (dollars/cwt.)	5.95	6.61	5.35	6.69
Yield (cwt./planted acre)	69.39	78.05	75.03	76.82

Table 32D--Rice production economic costs and returns including direct
Government payments and program participation costs,
California, 1988-91

Item	1988	1989	1990	1991
Dollars per planted acre				
Gross value of production (including direct Government payments):				
Market value of rice	412.87	515.91	401.41	513.93
Direct Government payments	327.26	331.86	379.55	322.03
Total, gross value of production	740.13	847.77	780.96	835.96
Economic (full ownership) costs:				
Variable cash expenses	347.56	373.00	379.23	394.94
General farm overhead	40.79	39.58	45.82	41.59
Taxes and insurance	20.16	21.40	22.31	21.91
Capital replacement	39.22	41.62	44.42	46.42
Operating capital	12.03	14.99	14.16	10.74
Other nonland capital	16.20	19.61	21.77	24.30
Land	184.67	209.54	172.86	189.44
Unpaid labor	47.13	50.04	49.75	50.30
Total, economic costs	707.76	769.78	750.32	779.64
Residual returns to management and risk	32.37	77.99	30.64	56.32
Harvest-period price (dollars/cwt.)	5.95	6.61	5.35	6.69
Yield (cwt./planted acre)	69.39	78.05	75.03	76.82

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1984 and 1986.

Figure 19

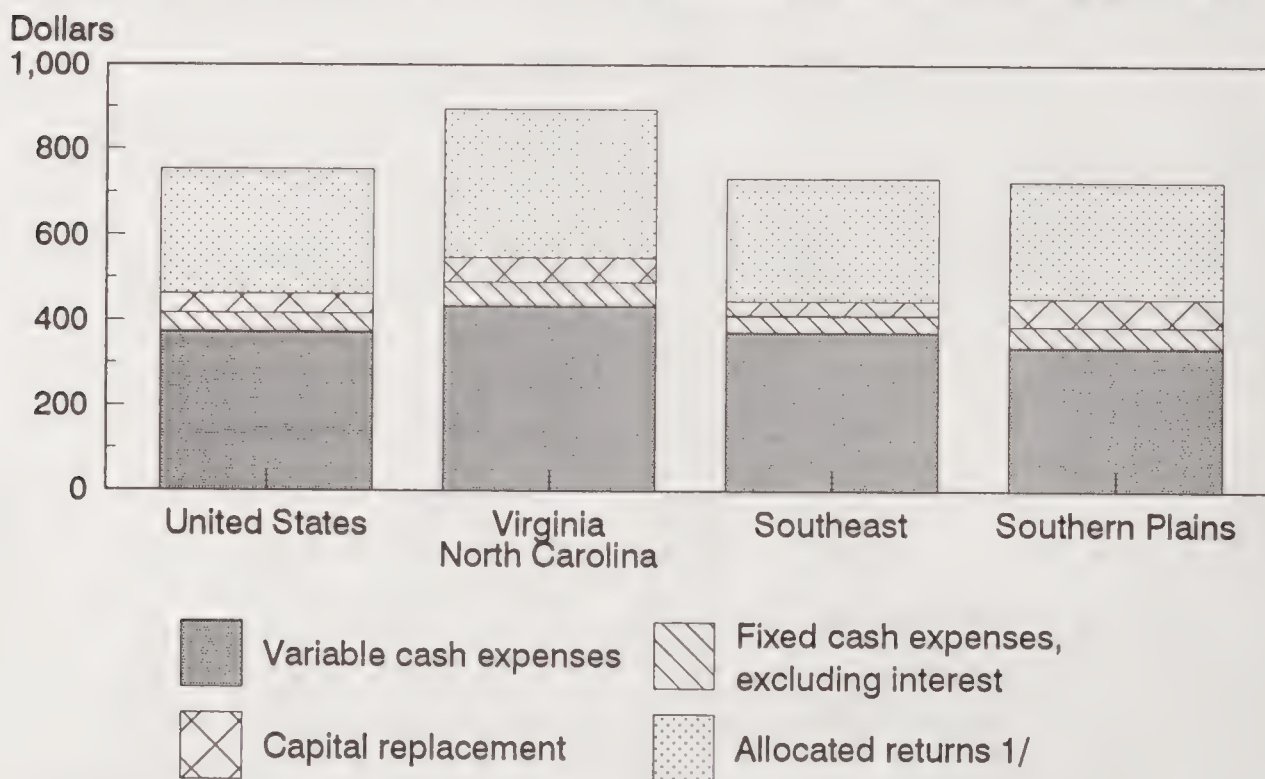
Peanut Production Regions



Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Figure 20

Peanut production economic costs per planted acre, 1991



1/ Income foregone by allocating resources owned by the operation (operating and other nonland capital, land, quota, and unpaid labor) to peanut production rather than some other income-producing use.

Table 33A--U.S. peanut production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	366.31	710.18	656.42	562.79	707.78	621.19	680.57	644.81	681.98	668.22	683.63	682.74
Peanut hay	10.14	11.01	10.99	17.22	18.68	16.81	9.21	10.66	13.68	11.31	11.26	6.57
Total, gross value of production	376.45	721.19	667.41	580.01	726.46	638.00	689.78	655.47	695.66	679.53	694.89	689.31
Cash expenses:												
Seed	66.69	71.80	59.48	62.41	74.09	59.60	63.58	79.70	73.44	70.54	71.98	110.47
Fertilizer, lime, and gypsum	42.92	37.25	34.69	33.55	35.85	33.66	27.48	26.49	30.59	31.15	28.77	43.86
Chemicals	69.44	78.75	82.82	89.00	92.78	91.57	74.01	71.45	72.91	76.21	80.14	87.56
Custom operations 1/	4.68	7.09	7.94	7.94	8.32	7.35	9.33	9.30	9.47	9.99	10.30	8.01
Fuel, lube, and electricity	40.74	35.40	33.96	30.86	27.09	30.65	27.85	34.08	33.72	36.56	38.64	38.02
Repairs	23.10	17.48	18.72	19.84	17.79	17.28	18.63	18.82	19.82	20.77	21.17	26.95
Hired labor	17.68	14.57	14.77	14.87	14.65	15.73	28.81	31.28	32.62	31.88	32.96	44.35
Drying	22.02	43.76	39.74	33.04	39.88	39.05	24.42	24.12	24.85	25.44	21.37	15.32
Other variable cash expenses 2/	0.00	0.09	0.20	0.20	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.49
Total, variable cash expenses	287.27	306.19	292.32	291.71	310.65	295.10	274.11	295.24	297.42	302.54	305.33	375.03
General farm overhead	20.49	30.80	27.36	27.92	28.87	24.31	32.81	31.67	33.71	32.51	37.63	23.98
Taxes and insurance	8.49	9.39	9.71	10.54	10.69	10.33	12.59	13.17	13.37	13.72	13.48	19.44
Interest	44.74	107.42	96.86	97.80	73.91	65.99	67.57	50.89	46.52	47.77	52.48	46.74
Total, fixed cash expenses	73.72	147.61	133.93	136.26	113.47	100.63	112.97	95.73	93.60	94.00	103.59	90.16
Total, cash expenses	360.99	453.80	426.25	427.96	424.12	395.73	387.08	390.97	391.02	396.54	408.92	465.19
Gross value of production less cash expenses	15.46	267.39	241.16	152.05	302.34	242.27	302.70	264.50	304.64	282.99	285.97	224.12
Harvest-period price (dollars/lb.)	0.24	0.27	0.25	0.24	0.25	0.22	0.29	0.28	0.28	0.28	0.35	0.28
Yield (lbs./planted acre)	1,526.43	2,647.61	2,642.50	2,350.15	2,827.78	2,771.74	2,354.78	2,305.30	2,427.32	2,432.40	1,954.70	2,466.64

Table 33B--U.S. peanut production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	366.31	710.18	656.42	562.79	707.78	621.19	680.57	644.81	681.98	668.22	683.63	682.74
Peanut hay	10.14	11.01	10.99	17.22	18.68	16.81	9.21	10.66	13.68	11.31	11.26	6.57
Total, gross value of production	376.45	721.19	667.41	580.01	726.46	638.00	689.78	655.47	695.66	679.53	694.89	689.31
Economic (full ownership) costs:												
Variable cash expenses	287.27	306.19	292.32	291.71	310.65	295.10	274.11	295.24	297.42	302.54	305.33	375.03
General farm overhead	20.49	30.80	27.36	27.92	28.87	24.31	32.81	31.67	33.71	32.51	37.63	23.98
Taxes and insurance	8.49	9.39	9.71	10.54	10.69	10.33	12.59	13.17	13.37	13.72	13.48	19.44
Capital replacement	39.02	43.63	46.88	49.85	49.52	43.05	48.42	48.89	51.51	53.82	54.91	44.74
Operating capital	12.14	14.81	11.66	9.56	11.37	8.37	5.95	7.16	8.23	9.64	9.23	10.20
Other nonland capital	7.72	8.16	8.36	8.02	9.62	8.06	9.78	9.71	11.91	15.20	16.82	22.12
Land	123.68	105.26	92.90	84.63	91.78	84.07	65.07	60.63	63.79	64.90	68.90	88.57
Peanut quota	N/A	N/A	N/A	N/A	N/A	N/A	112.96	111.70	113.79	113.90	116.79	128.44
Unpaid labor	19.15	15.79	16.01	16.10	15.87	17.05	35.96	38.13	39.50	42.07	43.93	41.18
Total, economic costs	517.96	534.03	505.20	498.33	528.37	490.33	597.65	616.30	633.23	648.30	667.02	753.70
Residual returns to management and risk	-141.51	187.16	162.21	81.68	198.09	147.67	92.13	39.17	62.43	31.23	27.87	-64.39
Harvest-period price (dollars/lb.)	0.24	0.27	0.25	0.24	0.25	0.22	0.29	0.28	0.28	0.28	0.35	0.28
Yield (lbs./planted acre)	1,526.43	2,647.61	2,642.50	2,350.15	2,827.78	2,771.74	2,354.78	2,305.30	2,427.32	2,432.40	1,954.70	2,466.64

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
 Note: Survey base changed in 1986 and 1991.

Table 34A--Peanut production cash costs and returns, Virginia and North Carolina, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	362.54	887.49	741.40	525.40	754.40	686.76	900.76	734.81	796.01	761.64	941.55	902.42
Peanut hay	5.71	7.99	8.49	13.93	13.89	13.32	9.66	10.95	14.90	12.07	11.84	6.66
Total, gross value of production	368.25	895.48	749.89	539.33	768.29	700.08	910.42	745.76	810.91	773.71	953.39	909.08
Cash expenses:												
Seed	65.29	62.41	73.02	76.19	89.64	75.22	74.12	86.56	101.35	87.64	87.03	106.82
Fertilizer, lime, and gypsum	49.18	36.55	33.64	32.81	31.89	30.69	29.54	29.76	32.07	32.14	31.85	49.06
Chemicals	77.79	88.29	95.12	100.01	102.20	102.11	90.59	88.35	89.59	93.97	98.75	108.54
Custom operations 1/	3.26	9.86	10.04	9.76	10.08	8.69	9.34	8.79	9.02	10.10	9.69	6.50
Fuel, tube, and electricity	27.69	31.16	29.87	26.41	20.69	25.29	33.22	37.32	38.72	38.42	48.69	50.08
Repairs	19.54	15.04	16.45	17.36	15.63	15.07	19.52	18.98	20.15	20.27	21.96	28.76
Hired labor	15.92	14.09	14.76	15.12	14.95	16.36	37.38	40.62	41.94	41.46	42.61	72.62
Drying	35.27	71.27	62.10	44.87	60.36	60.49	26.95	23.28	24.32	22.34	26.82	13.85
Other variable cash expenses 2/	0.00	0.12	0.22	0.22	0.22	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	293.94	328.79	335.21	322.75	345.67	334.14	320.66	333.66	357.16	346.34	367.40	436.23
General farm overhead	10.58	46.68	36.78	37.06	37.76	25.20	39.65	38.78	41.23	39.76	46.02	27.97
Taxes and insurance	9.65	11.61	12.24	12.98	13.23	10.02	17.17	17.54	17.83	17.92	18.31	27.54
Interest	24.70	127.97	138.28	110.26	134.05	77.71	52.35	39.73	36.12	37.19	40.78	40.28
Total, fixed cash expenses	44.93	186.26	187.30	160.30	185.04	112.93	109.17	96.05	95.18	94.87	105.11	95.79
Total, cash expenses	338.87	515.05	522.51	483.05	530.71	447.07	429.83	429.71	452.34	441.21	472.51	532.02
Gross value of production less cash expenses	29.38	380.43	227.38	56.28	237.58	253.01	480.59	316.05	358.57	332.50	480.88	377.06
Harvest-period price (dollars/lb.)	0.23	0.28	0.27	0.25	0.27	0.24	0.29	0.28	0.28	0.30	0.31	0.29
Yield (lbs./planted acre)	1,566.58	3,165.37	2,793.20	2,084.35	2,820.20	2,826.16	3,061.27	2,635.69	2,808.86	2,543.00	2,994.30	3,099.17

Table 34B--Peanut production economic costs and returns, Virginia and North Carolina, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	362.54	887.49	741.40	525.40	754.40	686.76	900.76	734.81	796.01	761.64	941.55	902.42
Peanut hay	5.71	7.99	8.49	13.93	13.89	13.32	9.66	10.95	14.90	12.07	11.84	6.66
Total, gross value of production	368.25	895.48	749.89	539.33	768.29	700.08	910.42	745.76	810.91	773.71	953.39	909.08
Economic (full ownership) costs:												
Variable cash expenses	293.94	328.79	335.21	322.75	345.67	334.14	320.66	333.66	357.16	346.34	367.40	436.23
General farm overhead	10.58	46.68	36.78	37.06	37.76	25.20	39.65	38.78	41.23	39.76	46.02	27.97
Taxes and insurance	9.65	11.61	12.24	12.98	13.23	10.02	17.17	17.54	17.83	17.92	18.31	27.54
Capital replacement	34.84	47.06	50.55	53.45	53.98	30.24	57.28	56.60	59.86	61.73	65.40	57.15
Operating capital	11.39	14.43	12.66	10.30	11.99	8.99	6.25	7.42	9.07	10.26	9.75	11.87
Other nonland capital	7.44	9.24	9.48	9.06	11.07	6.62	12.45	12.02	14.83	18.58	21.63	25.03
Land	87.58	164.43	131.94	82.86	121.81	106.77	97.18	80.36	82.77	89.05	97.79	96.15
Peanut quota	N/A	N/A	N/A	N/A	N/A	N/A	106.61	106.18	107.48	107.58	110.31	168.87
Unpaid labor	17.24	15.27	15.98	16.39	16.20	17.73	35.84	38.99	40.40	40.22	41.28	44.25
Total, economic costs	472.66	637.51	604.84	544.85	611.70	539.71	693.09	691.55	730.63	731.44	777.89	895.06
Residual returns to management and risk	-104.41	257.97	145.05	-5.52	156.59	160.37	217.33	54.21	80.28	42.27	175.50	14.02
Harvest-period price (dollars/lb.)	0.23	0.28	0.27	0.25	0.27	0.24	0.29	0.28	0.28	0.30	0.31	0.29
Yield (lbs./planted acre)	1,566.58	3,165.37	2,793.20	2,084.35	2,820.20	2,826.16	3,061.27	2,635.69	2,808.86	2,543.00	2,994.30	3,099.17

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Note: Survey base changed in 1986 and 1991.

Table 35A--Peanut production cash costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	383.26	757.29	755.91	632.08	782.24	662.70	673.03	675.26	717.16	682.62	589.00	673.78
Peanut hay	10.01	10.87	11.41	17.91	17.82	17.08	9.35	10.57	14.36	11.68	11.48	6.10
Total, gross value of production	393.27	768.16	767.32	649.99	800.06	679.78	682.38	685.83	731.52	694.30	600.48	679.88
Cash expenses:												
Seed	76.21	78.97	62.59	65.37	77.29	61.54	67.08	86.27	74.97	74.25	76.23	116.56
Fertilizer, lime, and gypsum	54.47	43.48	41.30	39.08	41.81	39.57	30.40	29.54	34.39	34.48	31.90	45.28
Chemicals	87.08	94.39	101.26	106.60	108.81	108.82	80.13	78.23	79.50	83.23	87.57	97.64
Custom operations 1/	5.50	6.22	7.34	7.38	7.53	6.62	9.68	9.73	9.96	10.45	10.78	6.88
Fuel, lube, and electricity	39.03	34.44	31.40	27.66	22.50	25.29	25.41	33.25	32.16	35.70	35.94	31.98
Repairs	23.04	16.41	17.56	18.47	15.95	15.14	17.69	17.87	18.93	19.85	19.97	24.43
Hired labor	17.05	14.04	13.59	13.67	13.33	13.87	28.03	29.35	31.25	29.53	31.05	38.07
Drying	22.62	44.81	42.51	35.30	41.93	40.50	23.27	22.93	24.32	24.62	16.94	13.83
Other variable cash expenses 2/	0.00	0.11	0.27	0.27	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.04
Total, variable cash expenses	325.00	332.86	317.82	313.79	329.42	311.62	281.69	307.17	305.48	312.11	310.38	374.71
General farm overhead	18.17	26.50	27.14	27.67	28.14	24.20	35.07	34.09	36.17	34.88	40.37	19.58
Taxes and insurance	8.42	9.00	9.38	10.24	10.17	10.16	12.24	12.75	13.01	13.52	13.15	19.62
Interest	43.23	116.08	104.25	112.39	65.56	70.56	74.73	57.26	52.65	53.94	59.35	49.02
Total, fixed cash expenses	69.82	151.58	140.77	150.30	103.87	104.92	122.04	104.10	101.83	102.34	112.87	88.22
Total, cash expenses	394.82	484.44	458.59	464.09	433.29	416.54	403.73	411.27	407.31	414.45	423.25	462.93
Gross value of production less cash expenses	-1.55	283.72	308.73	185.90	366.77	263.24	278.65	274.56	324.21	279.85	177.23	216.95
Harvest-period price (dollars/lb.)	0.22	0.27	0.24	0.23	0.24	0.21	0.28	0.28	0.28	0.27	0.34	0.27
Yield (lbs./planted acre)	1,759.83	2,846.25	3,110.11	2,702.82	3,219.14	3,132.36	2,384.96	2,382.34	2,556.30	2,561.00	1,717.20	2,485.58

Table 35B--Peanut production economic costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	383.26	757.29	755.91	632.08	782.24	662.70	673.03	675.26	717.16	682.62	589.00	673.78
Peanut hay	10.01	10.87	11.41	17.91	17.82	17.08	9.35	10.57	14.36	11.68	11.48	6.10
Total, gross value of production	393.27	768.16	767.32	649.99	800.06	679.78	682.38	685.83	731.52	694.30	600.48	679.88
Economic (full ownership) costs:												
Variable cash expenses	325.00	332.86	317.82	313.79	329.42	311.62	281.69	307.17	305.48	312.11	310.38	374.71
General farm overhead	18.17	26.50	27.14	27.67	28.14	24.20	35.07	34.09	36.17	34.88	40.37	19.58
Taxes and insurance	8.42	9.00	9.38	10.24	10.17	10.16	12.24	12.75	13.01	13.52	13.15	19.62
Capital replacement	36.75	42.05	45.61	48.16	46.64	41.69	47.36	47.89	50.70	52.83	53.35	34.59
Operating capital	14.87	17.12	13.37	10.80	12.66	9.34	6.41	7.82	8.84	10.41	10.02	10.19
Other nonland capital	7.40	7.71	7.97	7.60	8.90	7.65	9.30	9.24	11.41	14.52	15.87	17.77
Land	170.91	99.00	92.27	89.73	87.71	78.84	50.42	47.52	52.98	49.96	44.14	94.74
Peanut quota	N/A	N/A	N/A	N/A	N/A	N/A	120.72	120.00	122.46	122.58	125.69	123.04
Unpaid labor	18.47	15.20	14.73	14.80	14.45	15.03	32.41	34.01	36.07	38.24	40.67	39.67
Total, economic costs	599.99	549.45	528.29	522.80	538.09	498.53	595.62	620.49	637.12	649.05	653.64	733.91
Residual returns to management and risk	-206.72	218.71	239.03	127.19	261.97	181.25	86.76	65.34	94.40	45.25	-53.16	-54.03
Harvest-period price (dollars/lb.)	0.22	0.27	0.24	0.23	0.24	0.21	0.28	0.28	0.28	0.27	0.34	0.27
Yield (lbs./planted acre)	1,759.83	2,846.25	3,110.11	2,702.82	3,219.14	3,132.36	2,384.96	2,382.34	2,556.30	2,561.00	1,717.20	2,485.58

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1986 and 1991.

Table 36A--Peanut production cash costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	336.09	444.76	378.30	417.50	456.70	464.12	545.46	502.10	501.46	564.45	784.38	577.32
Peanut hay	13.31	13.88	11.99	17.98	24.89	18.71	8.45	10.73	10.88	9.75	10.48	7.88
Total, gross value of production	349.40	458.64	390.29	435.48	481.59	482.83	553.91	512.83	512.34	574.20	794.86	585.20
Cash expenses:												
Seed	49.25	61.46	42.57	44.50	52.81	42.87	45.10	57.43	49.64	48.52	50.02	94.90
Fertilizer, lime, and gypsum	16.50	22.11	21.33	20.21	21.72	20.52	16.94	16.07	18.66	20.34	17.82	36.60
Chemicals	29.89	31.43	33.92	36.51	39.25	38.77	43.07	41.81	42.34	44.38	46.79	45.66
Custom operations 1/	4.02	6.97	7.59	8.02	9.31	8.27	8.22	8.49	8.39	8.89	9.37	12.21
Fuel, lube, and electricity	52.68	41.34	42.55	42.27	45.27	48.61	31.55	34.08	34.73	37.71	39.52	48.37
Repairs	25.59	22.19	22.95	25.18	24.79	24.50	20.91	22.15	22.15	23.69	24.09	33.24
Hired labor	20.06	16.32	17.32	17.67	18.22	20.12	25.04	30.07	30.07	32.05	32.09	45.75
Drying	12.11	18.39	16.87	18.38	18.06	19.27	26.17	27.88	26.73	29.83	30.46	20.52
Other variable cash expenses 2/	0.00	0.03	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	2.09
Total, variable cash expenses	210.10	220.24	205.11	212.75	229.44	222.94	217.00	237.11	232.71	245.41	250.16	339.34
General farm overhead	21.31	28.55	20.71	21.57	24.06	23.95	21.01	20.33	21.50	20.73	23.99	34.43
Taxes and insurance	7.86	8.53	8.50	9.43	10.23	11.00	10.41	11.33	11.31	11.46	11.23	14.06
Interest	37.03	68.57	49.66	51.69	51.38	45.34	56.73	41.47	37.20	38.50	42.05	43.98
Total, fixed cash expenses	66.20	105.65	78.87	82.69	85.67	80.29	88.15	73.13	70.01	70.69	77.27	92.47
Total, cash expenses	276.30	325.89	283.98	295.44	315.11	303.23	305.15	310.24	302.72	316.10	327.43	431.81
Gross value of production less cash expenses	73.10	132.75	106.31	140.04	166.48	179.60	248.76	202.59	209.62	258.10	467.43	153.39
Harvest-period price (dollars/lb.)	0.32	0.26	0.25	0.25	0.27	0.26	0.31	0.27	0.28	0.28	0.40	0.28
Yield (lbs./planted acre)	1,049.47	1,718.39	1,523.50	1,668.16	1,704.12	1,791.96	1,752.30	1,874.28	1,790.92	1,994.50	1,950.60	2,032.81

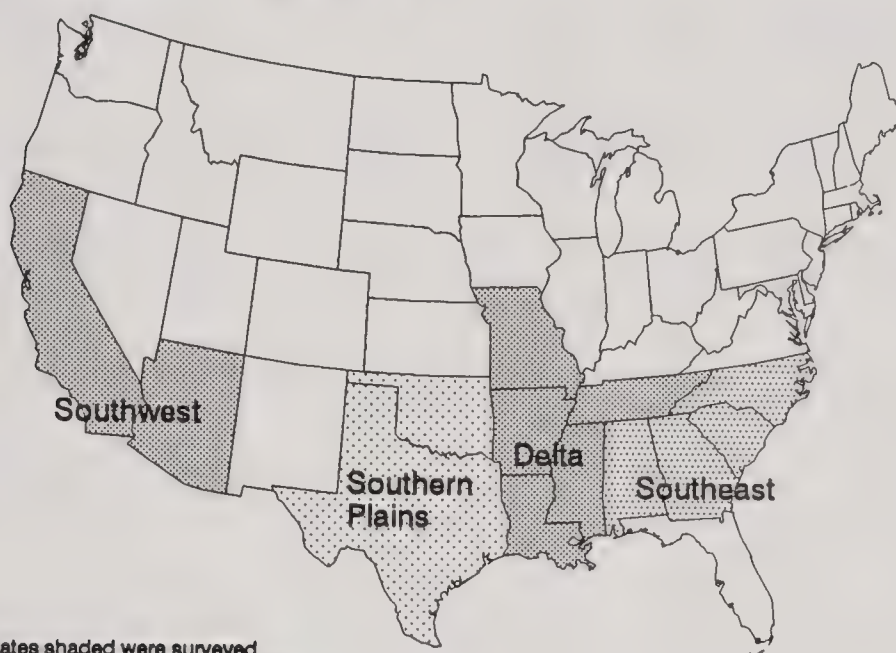
Table 36B--Peanut production economic costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production:												
Peanuts	336.09	444.76	378.30	417.50	456.70	464.12	545.46	502.10	501.46	564.45	784.38	577.32
Peanut hay	13.31	13.88	11.99	17.98	24.89	18.71	8.45	10.73	10.88	9.75	10.48	7.88
Total, gross value of production	349.40	458.64	390.29	435.48	481.59	482.83	553.91	512.83	512.34	574.20	794.86	585.20
Economic (full ownership) costs:												
Variable cash expenses	210.10	220.24	205.11	212.75	229.44	222.94	217.00	237.11	232.71	245.41	250.16	339.34
General farm overhead	21.31	28.55	20.71	21.57	24.06	23.95	21.01	20.33	21.50	20.73	23.99	34.43
Taxes and insurance	7.86	8.53	8.50	9.43	10.23	11.00	10.41	11.33	11.31	11.46	11.23	14.06
Capital replacement	46.17	44.77	46.83	51.35	54.40	56.18	45.35	46.30	48.02	51.26	52.46	66.87
Operating capital	7.36	9.36	7.22	5.88	7.13	5.39	4.31	5.22	5.86	7.05	6.64	9.23
Other nonland capital	8.53	8.39	8.35	8.28	10.58	10.22	9.33	9.39	11.33	14.86	16.40	33.05
Land	56.41	72.18	64.74	73.18	80.25	80.73	87.48	82.25	81.67	91.68	120.57	66.09
Peanut quota	N/A	N/A	N/A	N/A	N/A	N/A	93.69	92.50	93.36	93.45	95.82	119.95
Unpaid labor	21.74	17.69	18.76	19.15	19.74	21.79	46.87	48.57	48.69	50.65	50.65	43.72
Total, economic costs	379.48	409.71	380.22	401.59	435.83	432.20	535.45	553.00	554.45	586.55	627.92	726.74
Residual returns to management and risk	-30.08	48.93	10.07	33.89	45.76	50.63	18.46	-40.17	-42.11	-12.35	166.94	-141.54
Harvest-period price (dollars/lb.)	0.32	0.26	0.25	0.25	0.27	0.26	0.31	0.27	0.28	0.28	0.40	0.28
Yield (lbs./planted acre)	1,049.47	1,718.39	1,523.50	1,668.16	1,704.12	1,791.96	1,752.30	1,874.28	1,790.92	1,994.53	1,950.60	2,032.81

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.
Note: Survey base changed in 1986 and 1991.

Figure 21

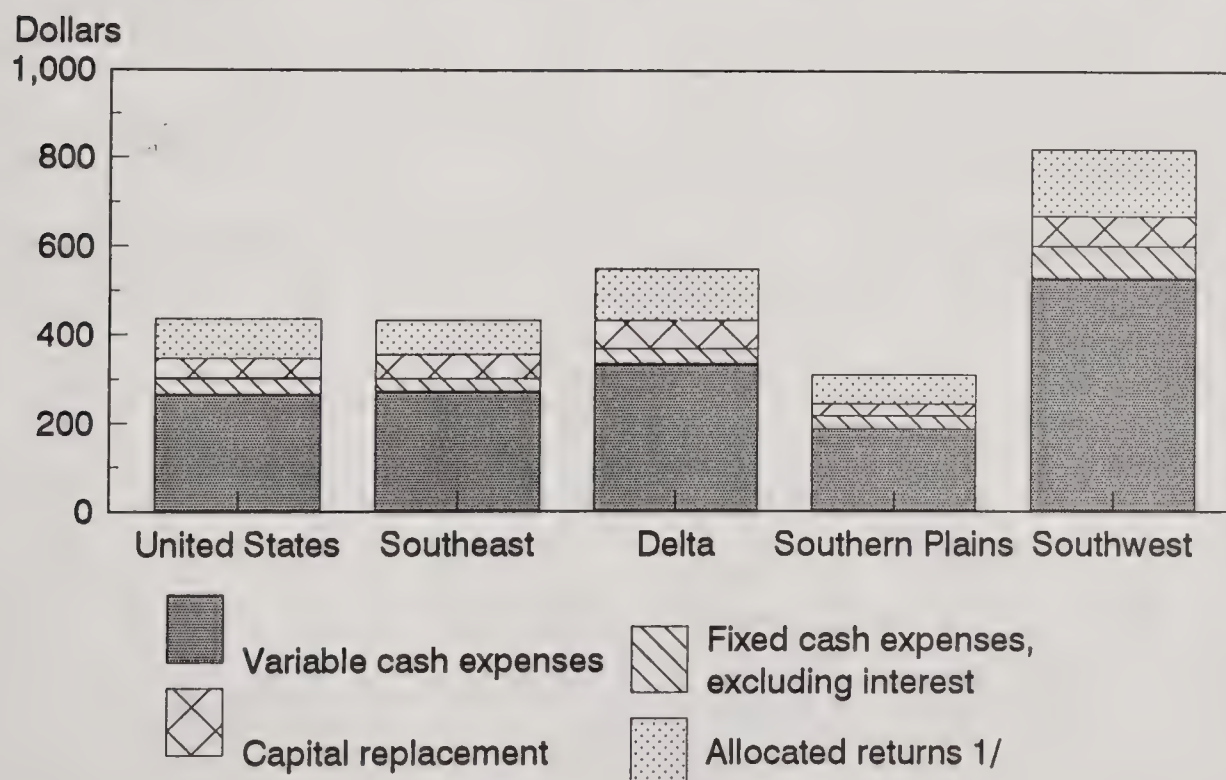
Cotton Production Regions



Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Figure 22

Cotton production economic costs per planted acre, 1991



1/ Income foregone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to cotton production rather than some other income-producing use.

Table 37A--U.S. cotton production cash costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	274.16	286.69	319.22	312.23	318.77	330.89	225.95	446.48	314.46	362.87	404.44	338.85
Cottonseed	39.62	38.86	35.16	64.82	46.48	32.97	29.73	47.13	58.58	48.57	59.20	34.42
Total, gross value of production	313.78	325.55	354.38	377.05	365.25	363.86	255.68	493.61	373.04	411.44	463.64	373.27
Cash expenses:												
Seed	6.27	8.30	8.53	8.35	8.96	8.75	6.23	8.16	8.65	8.44	9.11	13.30
Fertilizer, lime, and gypsum	18.27	22.62	26.79	22.36	25.59	24.97	23.60	22.65	26.39	28.83	26.49	35.62
Chemicals	37.31	42.27	47.70	48.88	51.26	52.60	44.23	44.51	45.75	48.71	51.19	48.19
Custom operations	9.81	15.5	17.62	17.11	17.67	15.37	11.91	13.44	13.17	13.31	14.42	17.29
Fuel, lube, and electricity	35.10	35.19	35.98	32.72	29.42	34.02	22.60	31.53	32.87	34.25	36.49	34.65
Repairs	28.42	17.37	18.45	19.70	19.03	19.05	19.74	21.13	23.28	23.64	24.87	23.34
Hired labor	27.74	21.59	23.32	23.28	23.16	24.60	37.69	40.21	41.01	42.96	43.80	38.43
Ginning	33.48	46.87	49.86	44.95	54.48	58.50	43.37	65.39	55.77	50.60	56.47	50.41
Other variable cash expenses 1/	3.94	6.54	7.55	7.57	7.70	7.64	8.47	9.12	9.03	9.30	8.67	5.31
Total, variable cash expenses	200.34	216.25	235.80	224.92	237.27	245.50	217.84	256.14	255.92	260.04	271.51	266.54
General farm overhead	9.61	20.89	23.88	23.23	24.28	21.16	21.29	21.59	23.46	22.29	25.80	15.67
Taxes and insurance	11.50	9.95	9.33	9.30	10.06	10.55	12.66	14.13	14.58	15.00	15.14	19.96
Interest	19.86	52.91	54.88	54.76	55.27	45.88	44.01	34.22	31.27	32.20	35.30	21.33
Total, fixed cash expenses	40.97	83.75	88.09	87.29	89.61	77.59	77.96	69.94	69.31	69.49	76.24	56.96
Total, cash expenses	241.31	300.00	323.89	312.21	326.88	323.09	295.80	326.08	325.23	329.53	347.75	323.50
Gross value of production less cash expenses	72.47	25.55	30.49	64.84	38.37	40.77	-40.12	167.53	47.81	81.91	115.89	49.77
Harvest-period price (dollars/lb.)	0.75	0.55	0.58	0.66	0.57	0.55	0.49	0.65	0.53	0.66	0.67	0.59
Yield (lbs./planted acre)	367.19	523.88	550.73	470.40	554.65	598.35	462.97	684.66	593.33	549.80	603.64	574.32

Table 37B--U.S. cotton production economic costs and returns, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	274.16	286.69	319.22	312.23	318.77	330.89	225.95	446.48	314.46	362.87	404.44	338.85
Cottonseed	39.62	38.86	35.16	64.82	46.48	32.97	29.73	47.13	58.58	48.57	59.20	34.42
Total, gross value of production	313.78	325.55	354.38	377.05	365.25	363.86	255.68	493.61	373.04	411.44	463.64	373.27
Economic (full ownership) costs:												
Variable cash expenses	200.34	216.25	235.80	224.92	237.27	245.50	217.84	256.14	255.92	260.04	271.51	266.54
General farm overhead	9.61	20.89	23.88	23.23	24.28	21.16	21.29	21.59	23.46	22.29	25.80	15.67
Taxes and insurance	11.50	9.95	9.33	9.30	10.06	10.55	12.66	14.13	14.58	15.00	15.14	19.96
Capital replacement	46.23	38.21	42.58	44.88	44.06	45.57	50.35	55.16	59.78	62.64	64.69	44.74
Operating capital	6.80	8.83	7.76	5.80	6.67	5.38	5.09	6.13	7.22	8.92	8.35	7.25
Other nonland capital	9.13	6.23	6.65	6.36	7.88	7.66	8.76	9.39	11.83	15.07	17.16	16.05
Land 2/	43.24	50.55	58.00	62.84	60.50	58.63	51.44	83.85	71.00	73.36	82.38	39.32
Unpaid labor	11.33	8.82	9.53	9.51	9.46	10.05	20.65	21.36	21.66	22.71	23.46	27.12
Total, economic costs	338.18	359.73	393.52	386.84	400.18	404.50	388.08	467.75	465.45	480.03	508.49	436.65
Residual returns to management and risk	-24.40	-34.18	-39.14	-9.79	-34.93	-40.64	-132.40	25.86	-92.41	-68.59	-44.85	-63.38
Harvest-period price (dollars/lb.)	0.75	0.55	0.58	0.66	0.57	0.55	0.49	0.65	0.53	0.66	0.67	0.59
Yield (lbs./planted acre)	367.19	523.88	550.73	470.40	554.65	598.35	462.97	684.66	593.33	549.80	603.64	574.32

1/ Includes cost of purchased irrigation water. 2/ Land costs on land basis.
Note: Survey base changed in 1987.

Table 38A--Cotton production cash costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	271.96	301.61	427.81	269.57	412.84	398.45	223.26	396.01	257.84	375.58	336.20	426.81
Cottonseed	31.05	34.95	35.27	52.97	49.64	28.95	23.04	34.63	42.53	43.41	44.76	29.23
Total, gross value of production	303.01	336.56	463.08	322.54	462.48	427.40	246.30	430.64	300.37	418.99	380.96	456.04
Cash expenses:												
Seed	5.50	5.46	5.23	5.52	6.96	6.48	5.36	6.41	6.83	6.79	7.24	8.45
Fertilizer, lime, and gypsum	45.16	48.28	49.41	47.55	50.99	47.00	29.41	27.13	32.85	34.87	31.73	47.61
Chemicals	93.36	94.31	101.31	105.12	106.95	110.35	99.30	96.99	98.68	103.30	108.90	70.27
Custom operations	13.82	12.66	14.03	14.27	14.78	12.76	7.60	9.98	8.28	9.11	8.23	12.62
Fuel, lube, and electricity	24.56	25.94	25.13	21.30	18.87	20.63	16.45	21.60	21.68	23.84	28.61	24.76
Repairs	41.56	16.55	18.66	19.10	20.13	20.14	18.50	20.33	21.82	23.34	24.94	28.54
Hired labor	19.48	15.19	15.81	15.72	15.51	16.17	42.82	44.56	46.37	49.63	51.81	22.14
Ginning	24.50	39.56	60.06	33.39	62.18	64.37	37.20	49.60	40.45	48.28	42.28	57.39
Other variable cash expenses 1/	0.00	2.70	1.82	1.83	1.86	1.85	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	267.94	260.65	291.46	263.80	298.23	299.74	256.64	276.60	276.96	299.16	303.74	271.78
General farm overhead	6.17	12.46	17.35	17.40	17.79	15.23	13.60	13.31	14.01	13.84	16.02	12.14
Taxes and insurance	12.38	8.29	8.85	9.38	10.26	11.62	12.72	13.63	14.10	14.94	15.25	17.05
Interest	14.69	51.25	66.42	67.61	45.30	44.66	29.96	22.85	20.36	22.20	24.35	25.38
Total, fixed cash expenses	33.24	72.00	92.62	94.39	73.35	71.51	56.28	49.79	48.47	50.98	55.62	54.57
Total, cash expenses	301.18	332.65	384.08	358.19	371.58	371.25	312.92	326.39	325.43	350.14	359.36	326.35
Gross value of production less cash expenses	1.83	3.91	79.00	-35.65	90.90	56.15	-66.62	104.25	-25.06	68.85	21.60	129.69
Harvest-period price (dollars/lb.)	0.79	0.57	0.58	0.67	0.58	0.55	0.49	0.66	0.53	0.64	0.66	0.63
Yield (lbs./planted acre)	344.12	528.69	739.39	400.00	713.34	728.96	457.82	603.08	486.49	586.85	509.39	677.47

Table 38B--Cotton production economic costs and returns, Southeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	271.96	301.61	427.81	269.57	412.84	398.45	223.26	396.01	257.84	375.58	336.20	426.81
Cottonseed	31.05	34.95	35.27	52.97	49.64	28.95	23.04	34.63	42.53	43.41	44.76	29.23
Total, gross value of production	303.01	336.56	463.08	322.54	462.48	427.40	246.30	430.64	300.37	418.99	380.96	456.04
Economic (full ownership) costs:												
Variable cash expenses	267.94	260.65	291.46	263.80	298.23	299.74	256.64	276.60	276.96	299.16	303.74	271.78
General farm overhead	6.17	12.46	17.35	17.40	17.79	15.23	13.60	13.31	14.01	13.84	16.02	12.14
Taxes and insurance	12.38	8.29	8.85	9.38	10.26	11.62	12.72	13.63	14.10	14.94	15.25	17.05
Capital replacement	61.99	46.98	52.00	53.82	55.95	59.74	58.39	63.37	67.97	73.71	76.63	54.16
Operating capital	8.68	10.56	8.82	6.99	7.91	6.18	7.15	8.28	9.47	11.87	11.25	7.39
Other nonland capital	13.33	7.67	8.15	7.58	9.89	10.02	9.94	10.71	13.42	17.46	20.29	18.37
Land 2/	40.36	46.21	54.80	47.88	54.78	49.25	41.01	46.50	43.95	49.90	45.56	29.46
Unpaid labor	7.96	6.21	6.46	6.42	6.33	6.60	16.46	17.34	17.98	20.50	21.80	22.49
Total, economic costs	418.81	399.03	447.89	413.27	461.14	458.39	415.91	449.74	457.86	501.38	510.54	432.84
Residual returns to management and risk	-115.80	-62.47	15.19	-90.73	1.34	-30.99	-169.61	-19.10	-157.49	-82.39	-129.58	23.20
Harvest-period price (dollars/lb.)	0.79	0.57	0.58	0.67	0.58	0.55	0.49	0.66	0.53	0.64	0.66	0.63
Yield (lbs./planted acre)	344.12	528.69	739.39	400.00	713.34	728.96	457.82	603.08	486.49	586.85	509.39	677.47

1/ Includes cost of purchased irrigation water. 2/ Land costs on land basis.
Note: Survey base changed in 1987.

Table 39A--Cotton production cash costs and returns, Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	301.64	295.46	426.17	359.38	378.68	366.24	273.78	502.38	350.43	415.75	430.61	502.79
Cottonseed	41.56	34.50	36.70	70.01	43.97	26.90	29.10	47.43	57.91	52.44	59.93	40.18
Total, gross value of production	343.20	329.96	462.87	429.39	422.65	393.14	302.88	549.81	408.34	468.19	490.54	542.97
Cash expenses:												
Seed	5.74	6.16	6.20	6.29	8.58	7.98	5.35	7.65	7.21	7.91	8.57	8.10
Fertilizer, lime, and gypsum	30.00	33.07	33.07	32.16	36.45	34.55	30.63	28.47	35.00	37.51	35.29	43.86
Chemicals	63.56	71.81	78.42	80.71	82.69	82.95	73.34	70.14	71.17	74.49	78.75	89.89
Custom operations	10.62	11.31	11.85	12.06	12.28	10.98	10.99	12.41	12.44	13.06	13.57	20.58
Fuel, lube, and electricity	24.77	28.70	28.38	23.07	18.90	22.50	19.24	25.75	27.10	26.64	31.38	29.24
Repairs	40.96	18.05	20.92	21.72	22.34	22.03	23.33	24.41	29.24	27.18	28.30	34.60
Hired labor	23.70	17.47	18.84	18.96	19.24	18.97	39.36	40.83	41.32	42.83	47.45	45.14
Ginning	29.93	37.05	55.09	43.18	57.08	56.83	43.36	60.74	52.14	50.34	51.40	62.83
Other variable cash expenses 1/	0.00	2.59	2.48	2.49	2.53	2.51	0.00	0.00	0.00	0.00	0.00	0.01
Total, variable cash expenses	229.28	226.07	255.71	241.02	260.44	259.67	246.24	271.08	275.62	279.96	294.71	334.25
General farm overhead	8.35	18.83	23.23	23.23	23.67	21.68	21.32	20.54	21.91	21.02	24.33	16.20
Taxes and insurance	11.42	7.91	8.52	9.02	9.58	9.90	13.12	13.87	14.85	14.74	14.72	18.98
Interest	21.31	45.68	75.89	51.30	63.68	44.09	42.90	32.34	29.34	30.31	33.20	28.16
Total, fixed cash expenses	41.08	72.42	107.64	83.55	96.93	75.67	77.34	66.75	66.10	66.07	72.25	63.34
Total, cash expenses	270.36	298.49	363.35	324.57	357.37	335.34	323.58	337.83	341.72	346.03	366.96	397.59
Gross value of production less cash expenses	72.84	31.47	99.52	104.82	65.28	57.80	-20.70	211.98	66.62	122.16	123.58	145.38
Harvest-period price (dollars/lb.)	0.77	0.56	0.58	0.66	0.55	0.54	0.48	0.64	0.53	0.64	0.65	0.61
Yield (lbs./planted acre)	393.76	524.32	732.53	541.26	690.95	674.14	565.15	779.91	661.18	649.61	662.47	824.25

Table 39B--Cotton production economic costs and returns, Delta, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	301.64	295.46	426.17	359.38	378.68	366.24	273.78	502.38	350.43	415.75	430.61	502.79
Cottonseed	41.56	34.50	36.70	70.01	43.97	26.90	29.10	47.43	57.91	52.44	59.93	40.18
Total, gross value of production	343.20	329.96	462.87	429.39	422.65	393.14	302.88	549.81	408.34	468.19	490.54	542.97
Economic (full ownership) costs:												
Variable cash expenses	229.28	226.07	255.71	241.02	260.44	259.67	246.24	271.08	275.62	279.96	294.71	334.25
General farm overhead	8.35	18.83	23.23	23.23	23.67	21.68	21.32	20.54	21.91	21.02	24.33	16.20
Taxes and insurance	11.42	7.91	8.52	9.02	9.58	9.90	13.12	13.87	14.85	14.74	14.72	18.98
Capital replacement	57.11	45.66	52.01	53.83	50.48	48.29	56.25	59.38	67.86	67.09	67.85	63.58
Operating capital	6.71	8.65	7.30	5.33	6.52	5.12	5.16	5.83	7.10	8.54	8.33	9.09
Other nonland capital	11.83	7.19	7.87	7.34	9.05	8.43	10.56	10.97	14.41	17.54	19.69	19.01
Land 2/	56.32	55.55	66.20	60.50	62.88	57.61	69.14	91.46	80.67	91.92	89.00	66.66
Unpaid labor	9.68	7.13	7.69	7.74	7.86	7.75	20.73	20.69	21.11	21.90	24.32	21.05
Total, economic costs	390.70	376.99	428.53	408.01	430.47	418.45	442.52	493.82	503.53	522.71	542.95	548.82
Residual returns to management and risk	-47.50	-47.03	34.34	21.38	-7.82	-25.31	-139.64	55.99	-95.19	-54.52	-52.41	-5.85
Harvest-period price (dollars/lb.)	0.77	0.56	0.58	0.66	0.55	0.54	0.48	0.64	0.53	0.64	0.65	0.61
Yield (lbs./planted acre)	393.76	524.32	732.53	541.26	690.95	674.14	565.15	779.91	661.18	649.61	662.47	824.25

1/ Includes cost of purchased irrigation water. 2/ Land costs on land basis.
Note: Survey base changed in 1987.

Table 40A--Cotton production cash costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	140.02	174.06	137.64	172.93	169.33	199.09	123.64	295.23	206.47	185.02	276.34	172.29
Cottonseed	20.47	29.09	18.63	41.39	29.27	20.80	14.63	32.27	42.14	31.13	41.23	19.42
Total, gross value of production	160.49	203.15	156.27	214.32	198.60	219.89	138.27	327.50	248.61	216.15	317.57	191.71
Cash expenses:												
Seed	6.41	9.59	10.23	9.25	9.57	9.51	6.18	8.44	9.44	8.36	9.07	17.50
Fertilizer	8.82	11.80	10.20	8.56	9.93	9.49	12.24	11.12	12.69	14.28	12.36	22.28
Chemicals	11.61	20.80	21.20	24.14	24.48	24.16	18.82	18.36	18.67	19.58	20.69	19.69
Custom operations	4.55	7.44	6.97	7.92	8.00	7.14	8.85	10.11	10.22	9.24	11.60	8.10
Fuel, lube, and electricity	26.45	28.03	26.57	26.14	24.72	26.53	20.06	24.53	25.73	26.80	29.48	37.75
Repairs	16.76	14.54	14.37	16.14	15.14	14.99	16.52	16.98	17.91	18.53	20.09	28.54
Hired labor	22.21	17.42	17.58	18.06	17.73	20.24	26.73	27.61	27.70	28.88	29.02	21.77
Ginning	21.51	35.37	27.24	29.95	35.68	39.90	27.90	52.51	46.87	31.83	46.76	31.41
Other variable cash expenses 1/	0.10	1.17	1.38	1.39	1.41	1.40	0.24	0.47	0.47	0.50	0.52	0.25
Total, variable cash expenses	118.42	146.16	135.74	141.55	146.66	153.36	137.54	170.13	169.70	158.00	179.59	187.29
General farm overhead	8.95	13.20	8.60	9.03	9.11	11.02	12.60	12.31	13.04	12.63	14.62	13.42
Taxes and insurance	6.97	6.31	5.85	6.25	6.48	7.01	10.04	11.29	11.47	11.85	12.24	16.33
Interest	15.55	32.00	20.68	21.75	19.70	20.94	33.00	24.71	22.33	23.17	25.33	11.30
Total, fixed cash expenses	31.47	51.51	35.13	37.03	35.29	38.97	55.64	48.31	46.84	47.65	52.19	41.05
Total, cash expenses	149.89	197.67	170.87	178.58	181.95	192.33	193.18	218.44	216.54	205.65	231.78	228.34
Gross value of production less cash expenses	10.60	5.48	-14.60	35.74	16.65	27.56	-54.91	109.06	32.07	10.50	85.79	-36.63
Harvest-period price (dollars/lb.)	0.70	0.48	0.51	0.60	0.52	0.53	0.49	0.63	0.47	0.62	0.63	0.56
Yield (lbs./planted acre)	201.02	362.39	267.63	287.70	322.74	374.83	253.48	470.63	439.29	298.42	438.63	307.66

Table 40B--Cotton production economic costs and returns, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	140.02	174.06	137.64	172.93	169.33	199.09	123.64	295.23	206.47	185.02	276.34	172.29
Cottonseed	20.47	29.09	18.63	41.39	29.27	20.80	14.63	32.27	42.14	31.13	41.23	19.42
Total, gross value of production	160.49	203.15	156.27	214.32	198.60	219.89	138.27	327.50	248.61	216.15	317.57	191.71
Economic (full ownership) costs:												
Variable cash expenses	118.42	146.16	135.74	141.55	146.66	153.36	137.54	170.13	169.70	158.00	179.59	187.29
General farm overhead	8.95	13.20	8.60	9.03	9.11	11.02	12.60	12.31	13.04	12.63	14.62	13.42
Taxes and insurance	6.97	6.31	5.85	6.25	6.48	7.01	10.04	11.29	11.47	11.85	12.24	16.33
Capital replacement	32.31	28.93	28.84	32.57	33.14	35.60	42.26	43.61	46.00	49.04	52.24	27.26
Operating capital	4.55	5.98	4.83	3.87	4.32	3.48	3.35	3.94	4.48	5.63	5.33	4.69
Other nonland capital	6.18	4.86	4.60	4.72	5.89	5.77	7.14	7.23	8.89	11.41	13.33	11.94
Land 2/	21.21	33.92	28.23	38.89	34.85	39.45	32.57	74.82	57.14	49.87	73.78	22.55
Unpaid labor	9.07	7.11	7.18	7.38	7.24	8.27	19.47	20.11	20.16	21.99	21.99	27.14
Total, economic costs	207.66	246.47	223.88	244.26	247.69	263.95	264.97	343.44	330.88	320.42	373.12	310.62
Residual returns to management and risk	-47.17	-43.32	-67.61	-29.94	-49.09	-44.06	-126.70	-15.94	-82.27	-104.27	-55.55	-118.91
Harvest-period price (dollars/lb.)	0.70	0.48	0.51	0.60	0.52	0.53	0.49	0.63	0.47	0.62	0.63	0.56
Yield (lbs./planted acre)	201.02	362.39	267.63	287.70	322.74	374.83	253.48	470.63	439.29	298.42	438.63	307.66

1/ Includes cost of purchased irrigation water. 2/ Land costs on land basis.

Note: Survey base changed in 1987.

Table 41A--Cotton production cash costs and returns, Southwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	784.60	697.48	671.15	742.88	678.84	673.69	547.02	876.89	639.70	828.05	841.11	719.53
Cottonseed	117.82	83.63	80.88	142.72	104.73	84.43	93.80	101.19	121.05	100.91	131.00	96.11
Total, gross value of production	902.42	781.11	752.03	885.60	783.57	758.12	640.82	978.08	760.75	928.96	972.11	815.64
Cash expenses:												
Seed	6.67	7.45	7.68	9.13	8.34	8.57	8.41	8.76	9.29	10.31	11.23	13.98
Fertilizer, lime, and gypsum	32.10	39.95	59.37	47.18	50.80	49.89	53.78	49.59	54.40	58.83	58.11	59.90
Chemicals	88.16	63.53	67.33	69.91	70.38	69.61	69.60	68.25	70.27	77.55	80.42	50.05
Custom operations	28.91	53.92	56.36	56.24	57.6	49.98	26.44	26.53	26.27	28.73	29.47	57.74
Fuel, lube, and electricity	88.00	74.94	76.45	72.75	64.16	76.43	41.37	68.67	71.32	76.27	76.76	47.03
Repairs	54.53	27.42	27.01	29.43	26.31	27.11	26.46	29.71	31.39	34.22	35.44	33.31
Hired labor	58.52	45.60	48.12	49.95	49.48	51.92	76.22	79.73	82.69	86.88	87.36	121.06
Ginning	90.12	107.19	105.17	103.26	108.66	119.26	107.56	122.56	97.95	113.62	109.56	97.75
Other variable cash expenses 1/	26.35	33.39	37.76	37.89	38.55	38.24	60.25	57.15	56.97	58.34	60.93	47.67
Total, variable cash expenses	473.36	453.39	485.25	475.74	474.27	497.86	470.09	510.95	500.55	544.75	549.28	528.49
General farm overhead	15.16	56.02	70.98	74.27	76.81	56.39	59.03	57.76	62.61	59.75	69.16	29.58
Taxes and insurance	29.85	27.32	20.56	20.18	22.32	22.64	22.23	24.28	24.66	25.85	26.74	43.58
Interest	37.12	143.35	122.94	168.45	161.91	131.00	95.60	73.77	66.97	69.20	76.18	45.18
Total, fixed cash expenses	82.13	226.69	214.48	262.90	261.04	210.03	176.86	155.81	154.24	154.80	172.08	118.34
Total, cash expenses	555.49	680.08	699.73	738.64	735.31	707.89	646.95	666.76	654.79	699.55	721.36	646.83
Gross value of production less cash expenses	346.93	101.03	52.30	146.96	48.26	50.23	-6.13	311.32	105.96	229.41	250.75	168.81
Harvest-period price (dollars/lb.)	0.77	0.61	0.63	0.72	0.65	0.59	0.49	0.69	0.62	0.70	0.74	0.68
Yield (lbs./planted acre)	1,016.29	1,136.00	1,073.72	1,028.17	1,044.56	1,146.77	1,112.37	1,269.99	1,031.77	1,182.93	1,136.63	1,058.13

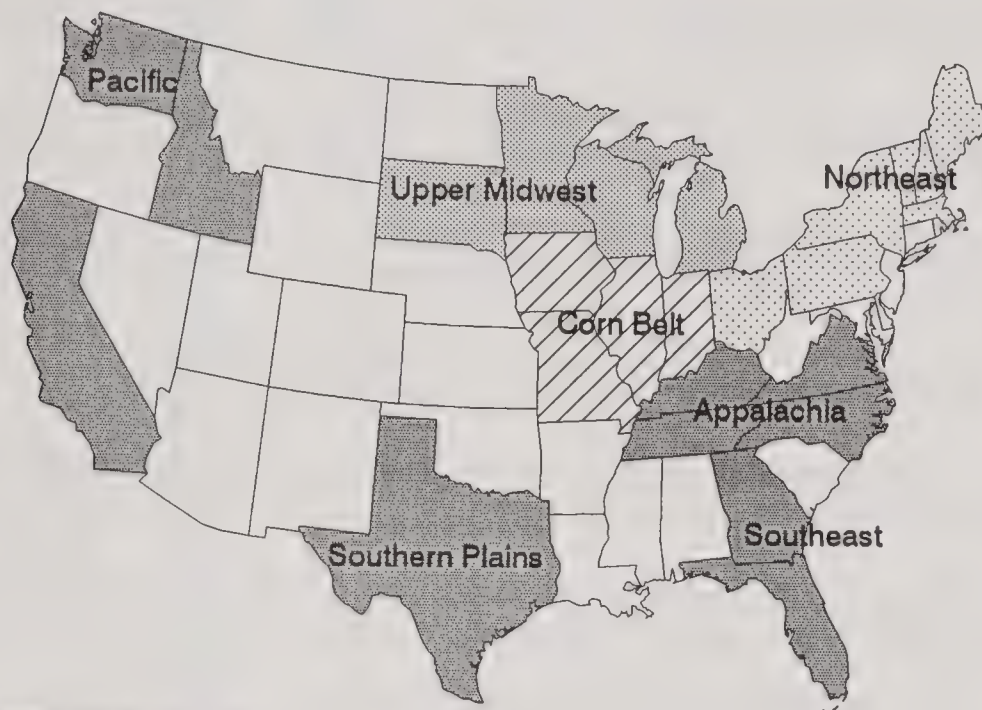
Table 41B--Cotton production economic costs and returns, Southwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars per planted acre												
Gross value of production (excluding direct Government payments):												
Cotton	784.60	697.48	671.15	742.88	678.84	673.69	547.02	876.89	639.70	828.05	841.11	719.53
Cottonseed	117.82	83.63	80.88	142.72	104.73	84.43	93.80	101.19	121.05	100.91	131.00	96.11
Total, gross value of production	902.42	781.11	752.03	885.60	783.57	758.12	640.82	978.08	760.75	928.96	972.11	815.64
Economic (full ownership) costs:												
Variable cash expenses	473.36	453.39	485.25	475.74	474.27	497.86	470.09	510.95	500.55	544.75	549.28	528.49
General farm overhead	15.16	56.02	70.98	74.27	76.81	56.39	59.03	57.76	62.61	59.75	69.16	29.58
Taxes and insurance	29.85	27.32	20.56	20.18	22.32	22.64	22.23	24.28	24.66	25.85	26.74	43.58
Capital replacement	83.01	59.81	67.11	71.74	65.46	67.09	68.46	83.51	88.31	95.16	98.80	67.06
Operating capital	15.49	19.31	16.49	12.63	14.05	11.62	11.07	13.17	15.64	19.32	18.27	14.37
Other nonland capital	16.08	9.58	10.55	10.26	11.80	11.45	11.43	13.40	16.52	21.74	24.64	24.52
Land 2/	116.01	108.21	134.51	154.00	142.27	127.59	98.42	115.37	111.27	126.35	117.41	66.25
Unpaid labor	23.90	18.63	19.66	20.40	20.21	21.21	26.95	28.24	28.77	30.62	30.79	47.44
Total, economic costs	772.86	752.27	825.10	839.21	827.19	815.84	767.68	846.68	848.33	923.54	935.09	821.29
Residual returns to management and risk	129.56	28.84	-73.07	46.39	-43.62	-57.72	-126.86	131.40	-87.58	5.42	37.02	-5.65
Harvest-period price (dollars/lb.)	0.77	0.61	0.63	0.72	0.65	0.59	0.49	0.69	0.62	0.70	0.74	0.68
Yield (lbs./planted acre)	1,016.29	1,136.00	1,073.72	1,028.17	1,044.56	1,146.77	1,112.37	1,269.99	1,031.77	1,182.93	1,136.63	1,058.13

1/ Includes cost of purchased irrigation water. 2/ Land costs on land basis.
Note: Survey base changed in 1987.

Figure 23

Milk Production Regions

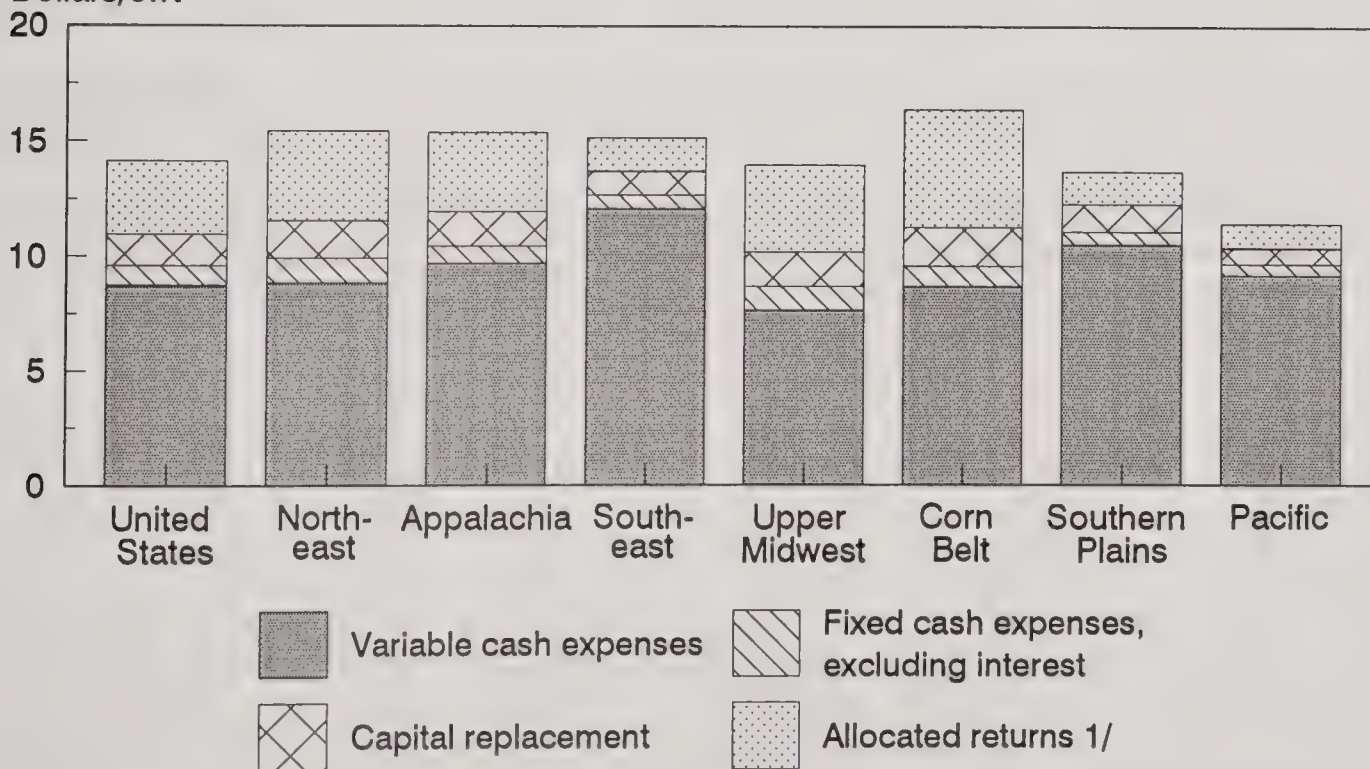


Producers in the States shaded were surveyed about production practices and costs of production. Production region for each commodity are based on common cultural practices.

Figure 24

Milk production economic costs per cwt, 1991

Dollars/cwt



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to milk production rather than some other income-producing use.

Table 42A--U.S. milk production cash costs and returns, per cow, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,724.19	1,864.44	1,861.17	1,902.86	1,866.69	1,679.68	1,681.82	1,755.29	1,753.15	2,008.55	2,093.84	1,890.01
Cattle	183.58	170.24	155.98	152.33	147.08	139.76	136.39	164.13	177.47	200.83	218.37	209.38
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.80	21.45	21.08
Total, gross value of production	1,907.77	2,034.68	2,017.15	2,055.19	2,013.77	1,819.44	1,818.21	1,919.42	1,930.62	2,227.18	2,333.66	2,120.47
Cash expenses:												
Feed--												
Concentrates	445.61	469.86	451.73	483.86	484.25	438.97	426.50	426.45	485.61	555.12	561.99	565.18
By-products						28.99	28.24	26.93	33.04	40.35	43.44	44.47
Hay	114.94	108.95	119.08	124.05	120.03	150.77	143.68	144.18	199.27	183.81	184.79	159.92
Silage	80.44	76.26	74.51	78.07	79.42	76.89	76.26	73.11	117.06	138.42	131.66	132.16
Pasture and other forage	5.75	5.45	5.61	5.37	5.61	8.20	8.28	7.98	10.04	13.84	13.98	14.25
Other--												
Milk hauling and marketing	56.53	61.29	63.88	63.27	63.16	76.67	73.81	84.94	87.43	83.10	88.59	88.75
Artificial insemination	13.27	14.98	16.10	16.52	17.10	16.47	16.29	16.86	17.27	18.54	18.76	17.82
Veterinary and medicine	25.07	27.24	28.10	29.27	30.16	27.08	27.68	28.24	28.87	31.73	32.08	30.42
Livestock hauling	2.44	2.72	2.82	2.72	2.66	3.92	3.64	3.61	3.67	3.48	2.75	3.19
Fuel, lube, and electricity	50.10	54.47	54.51	52.27	46.25	41.36	29.32	31.59	31.29	39.61	44.81	45.44
Machinery and building repairs	43.55	47.67	51.21	52.97	51.51	53.24	51.75	52.85	54.85	74.51	81.90	74.09
Hired labor	102.68	113.04	119.16	120.18	127.46	91.81	92.18	95.47	98.77	105.35	109.98	115.87
DHIA fees	5.89	6.81	7.10	7.31	7.55	8.17	8.08	8.35	8.56	8.17	8.60	8.94
Dairy supplies	24.18	25.88	25.74	26.60	26.99	27.34	26.04	26.54	28.31	30.63	31.72	32.08
Dairy assessment	0.00	0.00	0.00	67.66	69.77	17.21	48.60	26.72	4.31	0.00	0.76	7.72
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.75	11.01	10.71
Total, variable cash expenses	970.45	1,014.62	1,019.55	1,130.12	1,131.92	1,067.09	1,060.35	1,053.51	1,208.35	1,335.41	1,366.82	1,351.01
General farm overhead	61.36	73.09	82.10	70.39	83.09	69.73	78.78	97.18	115.33	64.70	80.50	74.64
Taxes and insurance	45.26	50.39	48.17	47.04	43.63	47.95	46.76	48.13	54.73	57.80	56.32	59.84
Interest	172.28	207.50	213.71	217.64	226.75	183.95	163.15	141.56	145.03	114.85	126.14	120.52
Total, fixed cash expenses	278.90	330.98	343.98	335.07	353.47	301.63	288.69	286.87	315.09	237.35	262.96	255.00
Total, cash expenses	1,249.35	1,345.60	1,363.53	1,465.19	1,485.39	1,368.72	1,349.04	1,340.38	1,523.44	1,572.76	1,629.78	1,606.01
Gross value of production less cash expenses	658.42	689.08	653.62	590.00	528.38	450.72	469.17	579.04	407.18	654.42	703.88	514.46
Pounds of milk per cow	13,344	13,619	13,762	14,095	13,955	13,240	13,501	14,062	14,369	14,841	15,284	15,446

Table 42B--U.S. milk production economic costs and returns, per cow, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,724.19	1,864.44	1,861.17	1,902.86	1,866.69	1,679.68	1,681.82	1,755.29	1,753.15	2,008.55	2,093.84	1,890.01
Cattle	183.58	170.24	155.98	152.33	147.08	139.76	136.39	164.13	177.47	200.83	218.37	209.38
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.80	21.45	21.08
Total, gross value of production	1,907.77	2,034.68	2,017.15	2,055.19	2,013.77	1,819.44	1,818.21	1,919.42	1,930.62	2,227.18	2,333.66	2,120.47
Economic (full ownership) costs:												
Variable cash expenses	970.45	1,014.62	1,019.55	1,130.12	1,131.92	1,067.09	1,060.35	1,053.51	1,208.35	1,335.41	1,366.82	1,351.01
General farm overhead	61.36	73.09	82.10	70.39	83.09	69.73	78.78	97.18	115.33	64.70	80.50	74.64
Taxes and insurance	45.26	50.39	48.17	47.04	43.63	47.95	46.76	48.13	54.73	57.80	56.32	59.84
Capital replacement	214.55	223.35	216.07	219.70	215.38	220.08	215.82	218.23	240.60	219.00	259.45	209.11
Operating capital	16.87	20.43	16.82	16.62	16.38	10.52	7.42	8.28	10.84	13.41	12.78	9.23
Other nonland capital	144.24	149.81	143.13	138.85	129.73	69.51	68.69	79.88	93.04	114.87	148.05	132.73
Land	46.35	50.39	49.54	51.27	50.03	22.78	18.35	18.91	25.01	61.85	59.77	62.03
Unpaid labor	182.87	198.84	207.98	205.66	216.83	222.88	223.68	231.66	239.65	255.63	269.76	284.57
Total, economic costs	1,681.95	1,780.92	1,783.36	1,879.65	1,886.99	1,730.55	1,719.85	1,755.79	1,987.55	2,122.67	2,253.45	2,183.16
Residual returns to management and risk	225.82	253.76	233.79	175.54	126.78	88.89	98.36	163.63	-56.93	104.51	80.21	-62.69
Pounds of milk per cow	13,344	13,619	13,762	14,095	13,955	13,240	13,501	14,062	14,369	14,841	15,284	15,446

See footnotes at end of Table 57B.

Table 43A--U.S. milk production cash costs and returns, per cwt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.95	13.69	13.52	13.50	13.38	12.69	12.46	12.48	12.20	13.53	13.70	12.24
Cattle	1.38	1.25	1.14	1.09	1.07	1.06	1.01	1.17	1.24	1.35	1.43	1.36
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	14.33	14.94	14.66	14.59	14.45	13.74	13.47	13.65	13.44	15.01	15.27	13.73
Cash expenses:												
feed--												
Concentrates	3.35	3.45	3.28	3.43	3.47	3.35	3.19	3.06	3.42	3.75	3.68	3.66
By-products						0.21	0.20	0.18	0.22	0.27	0.28	0.29
Hay	0.86	0.80	0.86	0.85	0.82	1.10	1.04	0.99	0.99	1.24	1.18	1.04
Silage	0.61	0.56	0.54	0.56	0.58	0.58	0.57	0.53	0.82	0.93	0.86	0.86
Pasture and other forage	0.04	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.07	0.09	0.09	0.09
Other--												
Milk hauling and marketing	0.43	0.45	0.45	0.44	0.45	0.58	0.55	0.61	0.61	0.56	0.58	0.57
Artificial insemination	0.10	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Veterinary and medicine	0.19	0.20	0.20	0.21	0.22	0.20	0.20	0.20	0.20	0.21	0.21	0.20
Livestock hauling	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Fuel, lube, and electricity	0.38	0.40	0.40	0.37	0.33	0.32	0.22	0.23	0.22	0.27	0.29	0.29
Machinery and building repairs	0.33	0.35	0.37	0.37	0.37	0.40	0.39	0.38	0.38	0.50	0.54	0.48
Hired labor	0.77	0.83	0.87	0.85	0.91	0.69	0.68	0.68	0.69	0.71	0.72	0.75
DHIA fees	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Dairy supplies	0.18	0.19	0.19	0.19	0.19	0.21	0.19	0.19	0.20	0.21	0.21	0.21
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.07	0.07
Total, variable cash expenses	7.30	7.45	7.39	7.98	8.07	8.04	7.86	7.51	8.44	9.00	8.92	8.76
General farm overhead	0.46	0.54	0.60	0.50	0.60	0.53	0.59	0.70	0.81	0.44	0.53	0.48
Taxes and insurance	0.34	0.37	0.35	0.36	0.34	0.37	0.35	0.35	0.39	0.39	0.37	0.39
Interest	1.29	1.52	1.56	1.55	1.63	1.41	1.23	1.03	1.02	0.77	0.83	0.78
Total, fixed cash expenses	2.09	2.43	2.51	2.41	2.57	2.31	2.17	2.08	2.22	1.60	1.73	1.65
Total, cash expenses	9.39	9.88	9.90	10.39	10.64	10.35	10.03	9.59	10.66	10.60	10.65	10.41
Gross value of production less cash expenses	4.94	5.06	4.76	4.20	3.80	3.39	3.43	4.06	2.78	4.41	4.62	3.32

Table 43B--U.S. milk production economic costs and returns, per cwt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.95	13.69	13.52	13.50	13.38	12.69	12.46	12.48	12.20	13.53	13.70	12.24
Cattle	1.38	1.25	1.14	1.09	1.07	1.06	1.01	1.17	1.24	1.35	1.43	1.36
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	14.33	14.94	14.66	14.59	14.45	13.74	13.47	13.65	13.44	15.01	15.27	13.73
Economic (full ownership) costs:												
Variable cash expenses	7.30	7.45	7.39	7.98	8.07	8.04	7.86	7.51	8.44	9.00	8.92	8.76
General farm overhead	0.46	0.54	0.60	0.50	0.60	0.53	0.59	0.70	0.81	0.44	0.53	0.48
Taxes and insurance	0.34	0.37	0.35	0.36	0.34	0.37	0.35	0.35	0.39	0.39	0.37	0.39
Capital replacement	1.61	1.64	1.57	1.56	1.54	1.66	1.60	1.55	1.67	1.48	1.70	1.35
Operating capital	0.13	0.15	0.12	0.12	0.12	0.08	0.05	0.06	0.08	0.09	0.08	0.06
Other nonland capital	1.08	1.10	1.04	0.99	0.93	0.53	0.51	0.57	0.65	0.77	0.97	0.86
Land	0.35	0.37	0.36	0.36	0.36	0.17	0.14	0.13	0.17	0.42	0.39	0.40
Unpaid labor	1.37	1.46	1.51	1.46	1.55	1.68	1.66	1.65	1.67	1.72	1.77	1.84
Total, economic costs	12.64	13.08	12.94	13.32	13.52	13.07	12.76	12.52	13.88	14.31	14.73	14.14
Residual returns to management and risk	1.69	1.86	1.72	1.27	0.93	0.68	0.71	1.13	-0.44	0.70	0.54	-0.41

See footnotes at end of Table 57B.

Table 44A--Milk production cash costs and returns, per cow, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,807.89	1,945.56	1,947.16	1,998.89	1,948.74	1,765.38	1,777.37	1,865.03	1,891.55	2,065.51	2,159.77	1,933.75
Cattle	185.02	166.52	153.73	147.53	143.19	134.30	131.70	158.15	173.13	180.63	197.17	191.00
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.31	16.03	15.75
Total, gross value of production	1,992.91	2,112.08	2,100.89	2,146.42	2,091.93	1,899.68	1,909.07	2,023.18	2,064.68	2,259.45	2,372.97	2,140.50
Cash expenses:												
Feed--												
Concentrates	458.33	503.74	476.30	499.41	501.24	422.41	414.33	423.93	495.12	567.61	551.28	560.37
By-products						15.28	15.67	13.97	17.30	11.15	11.28	10.81
Hay	76.13	72.16	88.60	74.13	71.42	86.52	88.07	89.81	106.60	124.44	130.64	137.27
Silage	90.78	86.04	83.73	91.91	90.39	85.39	84.86	80.50	105.10	146.58	137.59	172.62
Pasture and other forage	4.39	4.16	4.22	3.92	4.07	5.86	6.09	6.37	7.19	15.92	16.24	17.24
Other--												
Milk hauling and marketing	62.25	67.99	68.23	69.89	70.04	95.39	99.16	112.23	115.71	89.70	94.01	95.62
Artificial insemination	14.97	16.65	18.13	18.41	19.24	23.55	23.28	24.17	24.88	22.30	22.59	21.45
Veterinary and medicine	29.25	31.92	32.77	34.13	35.17	31.74	32.55	33.41	34.35	32.69	33.11	31.45
Livestock hauling	2.08	2.77	2.39	2.31	2.25	1.80	1.68	1.67	1.70	2.95	2.33	2.71
Fuel, lube, and electricity	51.64	56.90	56.03	55.44	49.91	48.82	35.61	37.82	38.24	40.26	46.41	47.85
Machinery and building repairs	42.33	47.18	49.15	51.00	49.50	54.73	53.42	54.45	56.90	89.50	89.90	89.17
Hired labor	124.65	134.61	146.80	150.50	161.19	89.17	97.29	99.20	108.49	73.02	76.26	83.01
DHIA fees	6.20	6.94	7.43	7.67	7.90	10.24	10.13	10.47	10.76	10.16	10.71	11.12
Dairy supplies	23.64	24.98	25.08	25.95	26.34	28.98	27.62	28.14	30.02	32.76	33.95	34.35
Dairy assessment	0.00	0.00	0.00	69.11	70.93	17.66	50.09	27.41	4.49	0.00	0.74	7.54
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	15.72	15.25
Total, variable cash expenses	986.64	1,056.04	1,058.86	1,153.78	1,159.59	1,017.54	1,039.85	1,043.55	1,156.85	1,271.54	1,272.76	1,337.83
General farm overhead	62.66	74.16	77.57	73.47	88.81	80.10	88.82	122.17	132.70	71.92	89.68	83.30
Taxes and insurance	42.44	47.18	44.85	46.86	47.24	56.28	54.65	55.83	60.30	76.52	74.78	79.60
Interest	123.61	147.94	154.07	157.33	159.41	132.03	127.14	130.90	137.84	112.40	123.51	118.06
Total, fixed cash expenses	228.71	269.28	276.49	277.66	295.46	268.41	270.61	308.90	330.84	260.84	287.97	280.96
Total, cash expenses	1,215.35	1,325.32	1,335.35	1,431.44	1,455.05	1,285.95	1,310.46	1,352.45	1,487.69	1,532.38	1,560.73	1,618.79
Gross value of production less cash expenses	777.56	786.76	765.54	714.98	636.88	613.73	598.61	670.73	576.99	727.07	812.24	521.71
Pounds of milk per cow	13,660	13,877	14,017	14,399	14,186	13,586	13,915	14,428	14,979	14,574	14,793	15,072

Table 44B--Milk production economic costs and returns, per cow, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,807.89	1,945.56	1,947.16	1,998.89	1,948.74	1,765.38	1,777.37	1,865.03	1,891.55	2,065.51	2,159.77	1,933.75
Cattle	185.02	166.52	153.73	147.53	143.19	134.30	131.70	158.15	173.13	180.63	197.17	191.00
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.31	16.03	15.75
Total, gross value of production	1,992.91	2,112.08	2,100.89	2,146.42	2,091.93	1,899.68	1,909.07	2,023.18	2,064.68	2,259.45	2,372.97	2,140.50
Economic (full ownership) costs:												
Variable cash expenses	986.64	1,056.04	1,058.86	1,153.78	1,159.59	1,017.54	1,039.85	1,043.55	1,156.85	1,271.54	1,272.76	1,337.83
General farm overhead	62.66	74.16	77.57	73.47	88.81	80.10	88.82	122.17	132.70	71.92	89.68	83.30
Taxes and insurance	42.44	47.18	44.85	46.86	47.24	56.28	54.65	55.83	60.30	76.52	74.78	79.60
Capital replacement	221.65	230.36	221.47	229.87	227.38	249.82	246.49	249.30	265.20	256.61	304.95	246.35
Operating capital	18.33	22.20	17.58	17.07	16.97	10.11	7.30	8.21	10.41	12.77	11.89	9.14
Other nonland capital	149.89	155.42	149.98	146.11	137.33	74.87	74.49	86.08	105.74	138.26	178.94	161.37
Land	35.74	38.86	37.85	39.82	40.43	26.31	21.76	28.00	36.80	65.97	58.81	61.67
Unpaid labor	190.17	206.77	223.56	226.45	239.77	252.53	263.60	261.95	299.54	312.25	326.12	354.96
Total, economic costs	1,707.52	1,830.99	1,831.72	1,933.43	1,957.52	1,767.55	1,796.96	1,855.09	2,067.54	2,205.84	2,317.93	2,334.22
Residual returns to management and risk	285.39	281.09	269.17	212.99	134.41	132.13	112.11	168.09	-2.86	53.61	55.04	-193.72
Pounds of milk per cow	13,660	13,877	14,017	14,399	14,186	13,586	13,915	14,428	14,979	14,574	14,793	15,072

See footnotes at end of Table 57B.

Table 45A--Milk production cash costs and returns, per cwt, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.26	14.02	13.89	13.88	13.74	12.99	12.77	12.93	12.63	14.17	14.60	12.83
Cattle	1.36	1.20	1.10	1.03	1.01	0.99	0.95	1.10	1.16	1.24	1.33	1.27
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.11	0.10
Total, gross value of production	14.62	15.22	14.99	14.91	14.75	13.98	13.72	14.03	13.79	15.50	16.04	14.20
Cash expenses:												
Feed--												
Concentrates	3.36	3.63	3.40	3.47	3.53	3.10	2.97	2.93	3.30	3.89	3.73	3.72
By-products						0.11	0.11	0.10	0.11	0.08	0.07	0.07
Hay	0.56	0.52	0.63	0.52	0.50	0.64	0.63	0.62	0.71	0.85	0.88	0.91
Silage	0.67	0.62	0.60	0.63	0.64	0.63	0.61	0.56	0.70	1.01	0.93	1.15
Pasture and other forage	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.11	0.11	0.11
Other--												
Milk hauling and marketing	0.46	0.49	0.49	0.48	0.50	0.70	0.71	0.78	0.78	0.62	0.64	0.63
Artificial insemination	0.11	0.12	0.13	0.13	0.14	0.17	0.17	0.17	0.17	0.15	0.15	0.14
Veterinary and medicine	0.21	0.23	0.23	0.24	0.25	0.23	0.23	0.23	0.23	0.22	0.22	0.21
Livestock hauling	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Fuel, lube, and electricity	0.38	0.41	0.40	0.39	0.35	0.36	0.26	0.26	0.25	0.28	0.31	0.32
Machinery and building repairs	0.31	0.34	0.35	0.35	0.35	0.40	0.38	0.38	0.38	0.61	0.61	0.59
Hired labor	0.91	0.97	1.05	1.04	1.13	0.66	0.70	0.69	0.72	0.50	0.52	0.55
DHIA fees	0.05	0.05	0.05	0.05	0.06	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Dairy supplies	0.17	0.18	0.18	0.18	0.19	0.21	0.20	0.19	0.20	0.22	0.23	0.23
Dairy assessment	0.00	0.00	0.00	0.48	0.13	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.11	0.10
Total, variable cash expenses	7.24	7.61	7.56	8.01	8.19	7.47	7.45	7.22	7.71	8.72	8.61	8.87
General farm overhead	0.46	0.53	0.55	0.51	0.63	0.59	0.64	0.85	0.89	0.49	0.61	0.55
Taxes and insurance	0.31	0.34	0.32	0.34	0.33	0.41	0.39	0.39	0.40	0.53	0.51	0.53
Interest	0.90	1.06	1.10	1.09	1.12	0.97	0.91	0.91	0.92	0.77	0.83	0.78
Total, fixed cash expenses	1.67	1.93	1.97	1.94	2.08	1.97	1.94	2.15	2.21	1.79	1.95	1.86
Total, cash expenses	8.91	9.54	9.53	9.95	10.27	9.44	9.39	9.37	9.92	10.51	10.56	10.73
Gross value of production less cash expenses	5.71	5.68	5.46	4.96	4.48	4.55	4.33	4.66	3.87	4.99	5.48	3.47

Table 45B--Milk production economic costs and returns, per cwt, Northeast, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.26	14.02	13.89	13.88	13.74	12.99	12.77	12.93	12.63	14.17	14.60	12.83
Cattle	1.36	1.20	1.10	1.03	1.01	0.99	0.95	1.10	1.16	1.24	1.33	1.27
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.11	0.10
Total, gross value of production	14.62	15.22	14.99	14.91	14.75	13.98	13.72	14.03	13.79	15.50	16.04	14.20
Economic (full ownership) costs:												
Variable cash expenses	7.24	7.61	7.56	8.01	8.19	7.47	7.45	7.22	7.71	8.72	8.61	8.87
General farm overhead	0.46	0.53	0.55	0.51	0.63	0.59	0.64	0.85	0.89	0.49	0.61	0.55
Taxes and insurance	0.31	0.34	0.32	0.34	0.33	0.41	0.39	0.39	0.40	0.53	0.51	0.53
Capital replacement	1.62	1.66	1.58	1.60	1.60	1.84	1.77	1.73	1.78	1.76	2.06	1.63
Operating capital	0.13	0.16	0.13	0.12	0.12	0.07	0.05	0.06	0.07	0.09	0.08	0.06
Other nonland capital	1.10	1.12	1.07	1.02	0.97	0.55	0.54	0.60	0.71	0.45	1.21	1.07
Land	0.26	0.28	0.27	0.28	0.28	0.19	0.16	0.19	0.25	0.45	0.40	0.41
Unpaid labor	1.39	1.49	1.59	1.58	1.69	1.86	1.89	1.82	2.00	2.14	2.20	2.36
Total, economic costs	12.51	13.19	13.07	13.46	13.81	12.98	12.89	12.85	13.81	15.13	15.68	15.48
Residual returns to management and risk	2.11	2.03	1.92	1.45	0.94	1.00	0.83	1.18	-0.02	0.37	0.36	-1.28

See footnotes at end of Table 57B.

Table 46A--Milk production cash costs and returns, per cow, Appalachia, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,753.77	1,889.95	1,904.53	1,905.29	1,850.74	1,611.71	1,635.64	1,714.64	1,717.93	1,932.21	2,070.80	1,858.28
Cattle	151.42	136.34	129.37	127.29	121.49	84.34	80.48	97.22	105.35	179.36	193.73	186.16
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.47	25.85	25.40
Total, gross value of production	1,905.19	2,026.29	2,033.90	2,032.58	1,972.23	1,696.05	1,716.12	1,811.86	1,823.28	2,133.04	2,290.38	2,069.84
Cash expenses:												
Feed--												
Concentrates	567.46	594.79	560.67	598.14	584.11	440.17	443.73	445.59	522.21	570.07	577.97	570.88
By-products												
Hay	95.89	90.89	90.96	100.50	89.24	22.83	21.87	24.33	24.43	40.25	40.67	41.35
Silage	104.34	98.90	89.75	92.40	102.59	78.61	90.92	84.63	99.39	106.89	106.91	103.14
Pasture and other forage	21.15	20.05	20.21	19.47	20.14	83.16	100.08	92.41	109.03	122.54	130.42	132.23
Other--												
Milk hauling and marketing	74.57	81.53	83.73	83.47	81.08	71.84	73.73	75.47	80.91	109.56	114.43	116.83
Artificial insemination	13.27	14.70	16.07	16.58	17.10	10.01	9.80	10.04	10.30	17.34	17.56	16.68
Veterinary and medicine	20.36	21.39	22.79	23.74	24.44	18.93	19.22	19.48	19.96	31.71	32.12	30.51
Livestock hauling	1.41	1.34	1.62	1.56	1.52	2.92	2.71	2.68	2.73	2.41	1.90	2.21
Fuel, lube, and electricity	50.44	56.14	54.89	51.87	43.99	29.66	21.40	23.62	23.33	42.43	49.11	48.84
Machinery and building repairs	37.39	41.43	43.51	44.37	43.88	35.67	34.83	35.28	36.68	59.30	59.57	59.08
Hired labor	135.53	149.70	145.69	155.59	158.77	135.22	138.31	144.33	151.33	164.51	169.80	186.64
DHIA fees	6.12	6.68	7.40	7.63	7.84	5.82	5.70	5.83	5.98	7.76	8.18	8.49
Dairy supplies	30.91	33.42	33.05	34.16	34.70	25.73	24.40	24.79	26.48	36.87	38.21	38.66
Dairy assessment	0.00	0.00	0.00	65.56	66.07	15.55	44.95	24.12	3.89	0.00	0.70	7.15
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.40	8.05	7.81
Total, variable cash expenses	1,158.84	1,210.96	1,170.34	1,295.04	1,275.47	985.30	1,041.03	1,022.02	1,126.97	1,332.06	1,369.06	1,384.64
General farm overhead	59.70	70.91	76.05	55.62	77.37	52.82	62.78	87.61	102.32	54.52	67.99	63.15
Taxes and insurance	38.34	42.77	39.68	43.45	35.42	43.34	46.20	44.87	46.75	41.83	40.88	43.51
Interest	121.08	145.43	154.85	154.68	161.33	166.55	120.30	139.87	95.43	77.20	84.83	81.09
Total, fixed cash expenses	219.12	259.11	270.58	253.75	274.12	262.71	229.28	272.35	244.50	173.55	193.70	187.75
Total, cash expenses	1,377.96	1,470.07	1,440.92	1,548.79	1,549.59	1,248.01	1,270.31	1,294.37	1,371.47	1,505.61	1,562.76	1,572.39
Gross value of production less cash expenses	527.23	556.22	592.98	483.79	422.64	448.04	445.81	517.49	451.81	627.43	727.62	497.45
Pounds of milk per cow	13,118	13,366	13,683	13,658	13,215	11,959	12,487	12,694	12,966	13,732	13,992	14,294

Table 46B--Milk production economic costs and returns, per cow, Appalachia, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,753.77	1,889.95	1,904.53	1,905.29	1,850.74	1,611.71	1,635.64	1,714.64	1,717.93	1,932.21	2,070.80	1,858.28
Cattle	151.42	136.34	129.37	127.29	121.49	84.34	80.48	97.22	105.35	179.36	193.73	186.16
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.47	25.85	25.40
Total, gross value of production	1,905.19	2,026.29	2,033.90	2,032.58	1,972.23	1,696.05	1,716.12	1,811.86	1,823.28	2,133.04	2,290.38	2,069.84
Economic (full ownership) costs:												
Variable cash expenses	1,158.84	1,210.96	1,170.34	1,295.04	1,275.47	985.30	1,041.03	1,022.02	1,126.97	1,332.06	1,369.06	1,384.64
General farm overhead	38.34	42.77	39.68	43.45	35.42	43.34	46.20	44.87	46.75	41.83	40.88	43.51
Taxes and insurance	59.70	70.91	76.05	55.62	77.37	52.82	62.78	87.61	102.32	54.52	67.99	63.15
Capital replacement	192.23	200.49	195.66	199.12	191.75	179.70	182.49	181.47	190.80	223.68	265.82	214.73
Operating capital	19.86	24.06	18.09	19.23	17.46	9.43	7.03	7.73	9.75	13.42	12.83	9.49
Other nonland capital	132.30	137.67	129.98	129.74	118.44	61.44	61.92	71.15	86.68	105.10	136.02	122.66
Land	56.55	61.48	60.20	68.83	62.14	42.35	40.94	38.62	44.71	88.04	79.65	86.55
Unpaid labor	145.06	157.72	148.47	162.19	164.74	202.43	208.16	218.24	230.49	238.89	246.57	271.03
Total, economic costs	1,802.88	1,906.06	1,838.47	1,973.22	1,942.79	1,576.81	1,650.55	1,671.71	1,838.47	2,097.54	2,218.82	2,195.76
Residual returns to management and risk	102.31	120.23	195.43	59.36	29.44	119.24	65.57	140.15	-15.19	35.50	71.56	-125.92
Pounds of milk per cow	13,118	13,366	13,683	13,658	13,215	11,959	12,487	12,694	12,966	13,732	13,992	14,294

See footnotes at end of Table 57B.

Table 47A--Milk production cash costs and returns, per cwt, Appalachia, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.38	14.14	13.92	13.94	13.98	13.48	13.10	13.51	13.25	14.07	14.80	13.00
Cattle	1.15	1.02	0.95	0.94	0.92	0.71	0.64	0.77	0.81	1.31	1.38	1.30
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.18	0.18
Total, gross value of production	14.53	15.16	14.87	14.88	14.90	14.19	13.74	14.28	14.06	15.54	16.36	14.48
Cash expenses:												
Feed--												
Concentrates	4.33	4.45	4.10	4.39	4.44	3.74	3.60	3.55	4.08	4.15	4.13	3.99
By-products						0.18	0.17	0.18	0.18	0.29	0.29	0.29
Hay	0.73	0.68	0.67	0.74	0.68	0.68	0.75	0.69	0.79	0.78	0.76	0.72
Silage	0.79	0.74	0.66	0.68	0.77	0.68	0.78	0.71	0.82	0.89	0.93	0.93
Pasture and other forage	0.16	0.15	0.15	0.14	0.15	0.08	0.08	0.08	0.08	0.10	0.10	0.10
Other--												
Milk hauling and marketing	0.57	0.61	0.61	0.61	0.61	0.60	0.59	0.59	0.62	0.80	0.82	0.82
Artificial insemination	0.10	0.11	0.12	0.12	0.13	0.08	0.08	0.08	0.08	0.13	0.13	0.12
Veterinary and medicine	0.16	0.16	0.17	0.17	0.18	0.15	0.15	0.15	0.15	0.23	0.23	0.21
Livestock hauling	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.02
Fuel, lube, and electricity	0.38	0.42	0.40	0.37	0.33	0.25	0.17	0.19	0.18	0.31	0.35	0.34
Machinery and building repairs	0.29	0.31	0.32	0.32	0.33	0.31	0.28	0.28	0.29	0.43	0.43	0.41
Hired labor	1.03	1.12	1.06	1.13	1.20	1.09	1.07	1.09	1.13	1.20	1.21	1.31
DHIA fees	0.05	0.05	0.05	0.06	0.06	0.05	0.04	0.04	0.04	0.06	0.06	0.06
Dairy supplies	0.24	0.25	0.24	0.25	0.26	0.21	0.19	0.19	0.20	0.27	0.27	0.27
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.05
Total, variable cash expenses	8.84	9.06	8.56	9.47	9.65	8.25	8.33	8.03	8.69	9.71	9.79	9.69
General farm overhead	0.42	0.48	0.55	0.41	0.58	0.44	0.50	0.69	0.79	0.40	0.49	0.44
Taxes and insurance	0.29	0.32	0.29	0.32	0.26	0.37	0.38	0.36	0.37	0.30	0.29	0.30
Interest	0.95	1.11	1.13	1.13	1.22	1.39	0.96	1.10	0.73	0.56	0.61	0.57
Total, fixed cash expenses	1.66	1.91	1.97	1.86	2.06	2.20	1.84	2.15	1.89	1.26	1.39	1.31
Total, cash expenses	10.50	10.97	10.53	11.33	11.71	10.45	10.17	10.18	10.58	10.97	11.18	11.00
Gross value of production less cash expenses	4.03	4.19	4.34	3.55	3.19	3.74	3.57	4.10	3.48	4.57	5.18	3.48

Table 47B--Milk production economic costs and returns, per cwt, Appalachia, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.38	14.14	13.92	13.94	13.98	13.48	13.10	13.51	13.25	14.07	14.80	13.00
Cattle	1.15	1.02	0.95	0.94	0.92	0.71	0.64	0.77	0.81	1.31	1.38	1.30
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.18	0.18
Total, gross value of production	14.53	15.16	14.87	14.88	14.90	14.19	13.74	14.28	14.06	15.54	16.36	14.48
Economic (full ownership) costs:												
Variable cash expenses	8.84	9.06	8.56	9.47	9.65	8.25	8.33	8.03	8.69	9.71	9.79	9.69
General farm overhead	0.42	0.48	0.55	0.41	0.58	0.44	0.50	0.69	0.79	0.40	0.49	0.44
Taxes and insurance	0.29	0.32	0.29	0.32	0.26	0.37	0.38	0.36	0.37	0.30	0.29	0.30
Capital replacement	1.47	1.50	1.43	1.46	1.45	1.50	1.46	1.43	1.47	1.63	1.90	1.50
Operating capital	0.15	0.18	0.13	0.14	0.13	0.08	0.06	0.06	0.08	0.10	0.09	0.07
Other nonland capital	1.01	1.03	0.95	0.96	0.90	0.51	0.50	0.56	0.67	0.77	0.97	0.85
Land	0.43	0.46	0.44	0.50	0.47	0.35	0.33	0.30	0.34	0.64	0.57	0.61
Unpaid labor	1.11	1.18	1.09	1.19	1.26	1.69	1.67	1.72	1.78	1.74	1.76	1.90
Total, economic costs	13.72	14.21	13.44	14.45	14.70	13.20	13.22	13.15	14.19	15.29	15.86	15.36
Residual returns to management and risk	0.81	0.95	1.43	0.43	0.20	0.99	0.52	1.13	-0.13	0.25	0.50	-0.88

See footnotes at end of Table 57B.

Table 48A--Milk production cash costs and returns, per cow, Southeast, 1985-91

Item	1985	1986	1987	1988	1989	1990	1991
Dollars							
Gross value of production:							
Milk	1,797.39	1,824.25	1,846.47	1,868.82	2,047.40	2,260.32	2,003.38
Cattle	122.06	116.90	142.64	159.86	151.12	161.03	156.41
Other income 1/	0.00	0.00	0.00	0.00	3.83	4.61	4.53
Total, gross value of production	1,919.45	1,941.15	1,989.11	2,028.68	2,202.35	2,425.96	2,164.32
Cash expenses:							
Feed--							
Concentrates	727.58	646.99	594.56	735.61	957.66	956.74	1,006.87
By-products	49.42	45.90	50.23	51.16	52.33	52.14	51.58
Hay	71.80	78.82	66.05	70.78	100.52	109.78	66.73
Silage	46.33	54.44	42.08	54.97	69.66	73.17	44.71
Pasture and other forage	16.32	17.72	14.45	16.95	14.14	17.39	12.51
Other--							
Milk hauling and marketing	88.61	97.00	103.21	101.54	95.85	102.75	94.18
Artificial insemination	7.58	7.49	7.76	7.97	11.55	11.70	11.11
Veterinary and medicine	18.86	19.33	19.79	20.31	26.88	27.22	25.86
Livestock hauling	1.89	1.75	1.73	1.77	1.55	1.23	1.42
Fuel, lube, and electricity	24.29	18.19	20.66	21.15	39.80	46.04	46.23
Machinery and building repairs	25.12	24.26	24.70	26.03	40.89	41.07	40.74
Hired labor	165.78	177.08	188.13	195.81	209.90	219.79	232.61
DHIA fees	4.02	3.97	4.10	4.21	3.62	3.81	3.96
Dairy supplies	23.65	22.75	23.39	24.93	25.11	26.02	26.33
Dairy assessment	15.06	42.91	23.25	3.77	0.00	0.88	6.93
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.06	0.08	0.07
Total, variable cash expenses	1,286.31	1,258.60	1,184.09	1,336.96	1,649.52	1,689.61	1,671.84
General farm overhead	25.71	29.05	35.83	42.52	36.75	45.83	42.57
Taxes and insurance	29.49	30.49	30.52	33.16	36.95	36.11	38.44
Interest	134.17	138.99	82.75	65.75	82.49	90.64	86.65
Total, fixed cash expenses	189.37	198.53	149.10	141.43	156.19	172.58	167.66
Total, cash expenses	1,475.68	1,457.13	1,333.19	1,478.39	1,805.71	1,862.19	1,839.50
Gross value of production less cash expenses	443.77	484.02	655.93	550.29	396.64	563.77	324.82
Pounds of milk per cow	11,585	11,920	12,218	12,237	13,129	13,699	13,855

Table 48B--Milk production economic costs and returns, per cow, Southeast, 1985-91

Item	1985	1986	1987	1988	1989	1990	1991
Dollars							
Gross value of production:							
Milk	1,797.39	1,824.25	1,846.47	1,868.82	2,047.40	2,260.32	2,003.38
Cattle	122.06	116.90	142.64	159.86	151.12	161.03	156.41
Other income	0.00	0.00	0.00	0.00	3.83	4.61	4.53
Total, gross value of production	1,919.45	1,941.15	1,989.11	2,028.68	2,202.35	2,425.96	2,164.32
Economic (full ownership) costs:							
Variable cash expenses	1,286.31	1,258.60	1,184.09	1,336.96	1,649.52	1,689.61	1,671.84
General farm overhead	25.71	29.05	35.83	42.52	36.75	45.83	42.57
Taxes and insurance	29.49	30.49	30.52	33.16	36.95	36.11	38.44
Capital replacement	105.02	103.87	102.81	110.75	146.66	174.29	140.79
Operating capital	13.00	9.01	9.56	12.29	16.63	15.84	11.47
Other nonland capital	40.47	40.44	46.50	58.75	47.39	61.33	55.31
Land	14.30	17.28	12.94	15.79	43.31	41.01	42.37
Unpaid labor	66.60	70.92	74.72	78.22	80.70	84.50	89.43
Total, economic costs	1,580.90	1,559.66	1,496.97	1,688.44	2,057.91	2,148.52	2,092.22
Residual returns to management and risk	338.55	381.49	492.14	340.24	144.44	277.44	72.10
Pounds of milk per cow	11,585	11,920	12,218	12,237	13,129	13,699	13,855

See footnotes at end of Table 57B.

Table 49A--Milk production cash costs and returns, per cwt, Southeast, 1985-91

Item	1985	1986	1987	1988	1989	1990	1991
Dollars							
Gross value of production:							
Milk	15.51	15.30	15.11	15.27	15.59	16.50	14.46
Cattle	1.05	0.98	1.17	1.31	1.15	1.18	1.13
Other income 1/	0.00	0.00	0.00	0.00	0.03	0.03	0.03
Total, gross value of production	16.57	16.28	16.28	16.58	16.77	17.71	15.62
Cash expenses:							
Feed--							
Concentrates	6.29	5.43	4.86	5.85	7.29	6.98	7.27
By-products	0.42	0.38	0.41	0.41	0.40	0.38	0.37
Hay	0.62	0.66	0.54	0.56	0.77	0.80	0.48
Silage	0.40	0.45	0.34	0.44	0.53	0.53	0.32
Pasture and other forage	0.14	0.15	0.12	0.13	0.11	0.13	0.09
Other--							
Milk hauling and marketing	0.77	0.82	0.84	0.81	0.73	0.75	0.68
Artificial insemination	0.07	0.06	0.06	0.06	0.09	0.09	0.08
Veterinary and medicine	0.16	0.16	0.16	0.16	0.20	0.20	0.19
Livestock hauling	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Fuel, lube, and electricity	0.21	0.15	0.17	0.17	0.30	0.34	0.33
Machinery and building repairs	0.22	0.20	0.21	0.21	0.31	0.30	0.29
Hired labor	1.43	1.49	1.54	1.60	1.60	1.60	1.68
DHIA fees	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Dairy supplies	0.20	0.19	0.19	0.20	0.19	0.19	0.19
Dairy assessment	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total, variable cash expenses	11.11	10.54	9.66	10.67	12.56	12.34	12.06
General farm overhead	0.22	0.24	0.29	0.35	0.28	0.33	0.31
Taxes and insurance	0.25	0.25	0.25	0.26	0.28	0.26	0.28
Interest	1.16	1.17	0.68	0.52	0.63	0.66	0.63
Total, fixed cash expenses	1.63	1.66	1.22	1.13	1.19	1.25	1.22
Total, cash expenses	12.74	12.20	10.88	11.80	13.75	13.59	13.28
Gross value of production less cash expenses	3.83	4.09	5.40	4.78	3.02	4.12	2.34

Table 49B--Milk production economic costs and returns, per cwt, Southeast, 1985-91

Item	1985	1986	1987	1988	1989	1990	1991
Dollars							
Gross value of production:							
Milk	15.51	15.30	15.11	15.27	15.59	16.50	14.46
Cattle	1.05	0.98	1.17	1.31	1.15	1.18	1.13
Other income	0.00	0.00	0.00	0.00	0.03	0.03	0.03
Total, gross value of production	16.57	16.28	16.28	16.58	16.77	17.71	15.62
Economic (full ownership) costs:							
Variable cash expenses	11.11	10.54	9.66	10.67	12.56	12.34	12.06
General farm overhead	0.22	0.24	0.29	0.35	0.28	0.33	0.31
Taxes and insurance	0.25	0.25	0.25	0.26	0.28	0.26	0.28
Capital replacement	0.90	0.87	0.84	0.88	1.12	1.27	1.02
Operating capital	0.11	0.08	0.08	0.10	0.13	0.12	0.08
Other nonland capital	0.35	0.34	0.38	0.47	0.36	0.45	0.40
Land	0.12	0.14	0.11	0.13	0.33	0.30	0.31
Unpaid labor	0.57	0.59	0.61	0.64	0.61	0.62	0.65
Total, economic costs	13.64	13.05	12.22	13.50	15.67	15.69	15.11
Residual returns to management and risk	2.93	3.23	4.06	3.08	1.10	2.02	0.51

See footnotes at end of Table 57B.

Note: Regions were redefined so that results for the Southeast are available from 1985.

Table 50A--Milk production cash costs and returns, per cow, Upper Midwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,593.87	1,735.80	1,727.64	1,781.90	1,734.90	1,565.85	1,556.09	1,630.27	1,658.70	1,956.46	2,017.80	1,834.01
Cattle	208.04	196.48	179.23	175.22	168.30	146.85	144.27	173.82	186.86	236.47	257.96	247.79
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.76	26.20	25.74
Total, gross value of production	1,801.91	1,932.28	1,906.87	1,957.12	1,903.20	1,712.70	1,700.36	1,804.09	1,845.56	2,214.69	2,301.96	2,107.54
Cash expenses:												
Feed--												
Concentrates	346.41	361.73	360.11	393.14	393.64	365.46	359.03	369.11	414.91	457.00	467.57	477.89
By-products												
Hay	75.51	71.57	72.07	71.85	70.12	124.07	123.84	126.86	218.09	191.18	178.66	145.65
Silage	87.86	83.28	82.74	82.96	85.50	97.25	94.63	94.64	186.49	175.28	157.00	150.50
Pasture and other forage	2.74	2.60	2.32	2.18	2.58	6.74	6.97	7.25	10.84	5.94	4.63	6.00
Other--												
Milk hauling and marketing	37.77	41.64	41.43	42.92	42.09	60.57	53.70	72.96	76.83	64.94	69.22	71.07
Artificial insemination	11.89	14.31	14.42	14.86	15.30	15.46	15.31	15.88	16.33	19.91	20.16	19.15
Veterinary and medicine	26.12	28.63	29.28	30.49	31.40	24.34	24.88	25.33	25.95	34.85	35.30	33.53
Livestock hauling	3.60	3.90	4.17	4.02	3.91	5.92	5.51	5.47	5.59	4.94	3.90	4.54
Fuel, lube, and electricity	50.45	54.65	55.82	53.61	48.06	44.13	29.66	31.98	31.25	33.48	37.29	37.78
Machinery and building repairs	43.73	48.14	51.00	52.72	51.17	58.36	56.95	57.80	60.15	81.81	82.18	81.51
Hired labor	72.89	81.98	87.07	82.44	89.08	79.60	82.93	87.56	90.17	62.14	68.64	70.72
DHIA fees	5.51	6.51	6.63	6.83	7.04	7.91	7.81	8.06	8.27	7.65	8.06	8.37
Dairy supplies	20.81	22.12	22.10	22.86	23.22	26.05	24.80	25.19	26.87	27.77	28.78	29.12
Dairy assessment	0.00	0.00	0.00	64.91	66.37	16.62	46.26	25.58	4.17	0.00	0.75	7.62
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.20	9.05	8.78
Total, variable cash expenses	785.29	821.06	829.16	925.79	929.48	950.33	950.71	970.26	1,196.97	1,185.92	1,183.10	1,164.41
General farm overhead	69.78	83.56	92.88	84.09	91.81	78.84	100.64	105.16	131.79	79.41	99.02	91.98
Taxes and insurance	46.30	52.05	52.40	52.79	54.08	54.12	51.61	53.50	66.17	65.79	64.30	68.43
Interest	208.37	252.35	256.03	262.65	279.77	246.46	202.42	181.13	165.34	134.92	148.25	141.72
Total, fixed cash expenses	324.45	387.96	401.31	399.53	425.66	379.42	354.67	339.79	363.30	280.12	311.57	302.13
Total, cash expenses	1,109.74	1,209.02	1,230.47	1,325.32	1,355.14	1,329.75	1,305.38	1,310.05	1,560.27	1,466.04	1,494.67	1,466.54
Gross value of production less cash expenses	692.17	723.26	676.40	631.80	548.06	382.95	394.98	494.04	285.29	748.65	807.29	641.00
Pounds of milk per cow	12,678	13,012	13,099	13,523	13,275	12,782	12,850	13,462	13,912	14,655	14,947	15,233

Table 50B--Milk production economic costs and returns, per cow, Upper Midwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,593.87	1,735.80	1,727.64	1,781.90	1,734.90	1,565.85	1,556.09	1,630.27	1,658.70	1,956.46	2,017.80	1,834.01
Cattle	208.04	196.48	179.23	175.22	168.30	146.85	144.27	173.82	186.86	236.47	257.96	247.79
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.76	26.20	25.74
Total, gross value of production	1,801.91	1,932.28	1,906.87	1,957.12	1,903.20	1,712.70	1,700.36	1,804.09	1,845.56	2,214.69	2,301.96	2,107.54
Economic (full ownership) costs:												
Variable cash expenses	785.29	821.06	829.16	925.79	929.48	950.33	950.71	970.26	1,196.97	1,185.92	1,183.10	1,164.41
General farm overhead	69.78	83.56	92.88	84.09	91.81	78.84	100.64	105.16	131.79	79.41	99.02	91.98
Taxes and insurance	46.30	52.05	52.40	52.79	54.08	54.12	51.61	53.50	66.17	65.79	64.30	68.43
Capital replacement	236.45	248.53	243.65	247.17	242.98	268.19	262.07	266.13	307.51	240.15	285.39	230.54
Operating capital	15.04	18.22	14.87	14.44	14.43	9.10	6.42	7.34	10.35	11.92	11.07	7.96
Other nonland capital	151.37	158.74	155.88	149.24	140.96	79.79	78.56	91.52	117.48	143.88	186.21	167.93
Land	52.66	57.25	56.33	59.30	57.24	18.60	12.72	11.84	22.29	53.33	53.26	55.81
Unpaid labor	215.41	234.22	257.69	243.05	261.62	253.17	264.17	280.34	288.73	301.91	333.47	343.59
Total, economic costs	1,572.30	1,673.63	1,702.86	1,775.87	1,792.60	1,712.14	1,726.90	1,786.09	2,141.29	2,082.31	2,215.82	2,130.65
Residual returns to management and risk	229.61	258.65	204.01	181.25	110.60	0.56	-26.54	18.00	-295.73	132.38	86.14	-23.11
Pounds of milk per cow	12,678	13,012	13,099	13,523	13,275	12,782	12,850	13,462	13,912	14,655	14,947	15,233

See footnotes at end of Table 57B.

Table 51A--Milk production cash costs and returns, per cwt, Upper Midwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.60	13.34	13.19	13.18	13.07	12.25	12.11	12.11	11.92	13.35	13.50	12.04
Cattle	1.64	1.51	1.37	1.30	1.28	1.15	1.12	1.29	1.34	1.61	1.73	1.63
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.17
Total, gross value of production	14.24	14.85	14.56	14.48	14.35	13.40	13.23	13.40	13.26	15.11	15.41	13.84
Cash expenses:												
Feed--												
Concentrates	2.74	2.78	2.75	2.90	2.96	2.88	2.81	2.76	2.99	3.12	3.13	3.14
By-products						0.14	0.14	0.12	0.15	0.08	0.08	0.08
Hay	0.60	0.55	0.55	0.53	0.53	0.98	0.97	0.95	1.58	1.30	1.20	0.96
Silage	0.70	0.64	0.63	0.62	0.65	0.76	0.74	0.70	1.34	1.20	1.05	0.99
Pasture and other forage	0.02	0.02	0.02	0.02	0.02	0.05	0.06	0.05	0.08	0.04	0.03	0.04
Other--												
Milk hauling and marketing	0.29	0.32	0.31	0.31	0.31	0.47	0.42	0.54	0.55	0.44	0.46	0.47
Artificial insemination	0.09	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.14	0.13	0.13
Veterinary and medicine	0.21	0.22	0.22	0.23	0.24	0.19	0.19	0.19	0.19	0.24	0.24	0.22
Livestock hauling	0.03	0.03	0.03	0.03	0.03	0.05	0.04	0.04	0.04	0.03	0.03	0.03
Fuel, lube, and electricity	0.40	0.42	0.43	0.40	0.36	0.34	0.23	0.24	0.22	0.23	0.25	0.25
Machinery and building repairs	0.35	0.37	0.39	0.39	0.38	0.46	0.44	0.43	0.43	0.56	0.55	0.54
Hired labor	0.58	0.63	0.67	0.61	0.67	0.62	0.65	0.65	0.65	0.42	0.46	0.46
DHIA fees	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05
Dairy supplies	0.16	0.17	0.17	0.17	0.18	0.20	0.19	0.19	0.19	0.19	0.19	0.19
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.05
Total, variable cash expenses	6.21	6.31	6.33	6.85	7.00	7.45	7.42	7.23	8.62	8.09	7.92	7.65
General farm overhead	0.55	0.64	0.72	0.62	0.69	0.62	0.78	0.78	0.95	0.54	0.66	0.60
Taxes and insurance	0.37	0.40	0.40	0.38	0.42	0.42	0.40	0.40	0.48	0.45	0.43	0.45
Interest	1.64	1.94	1.95	1.94	2.11	1.93	1.57	1.35	1.19	0.92	0.99	0.93
Total, fixed cash expenses	2.56	2.98	3.07	2.94	3.22	2.97	2.75	2.53	2.62	1.91	2.08	1.98
Total, cash expenses	8.77	9.29	9.40	9.79	10.22	10.42	10.17	9.76	11.24	10.00	10.00	9.63
Gross value of production less cash expenses	5.47	5.56	5.16	4.69	4.13	2.98	3.06	3.64	2.02	5.11	5.41	4.21

Table 51B--Milk production economic costs and returns, per cwt, Upper Midwest, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.60	13.34	13.19	13.18	13.07	12.25	12.11	12.11	11.92	13.35	13.50	12.04
Cattle	1.64	1.51	1.37	1.30	1.28	1.15	1.12	1.29	1.34	1.61	1.73	1.63
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.17
Total, gross value of production	14.24	14.85	14.56	14.48	14.35	13.40	13.23	13.40	13.26	15.11	15.41	13.84
Economic (full ownership) costs:												
Variable cash expenses	6.21	6.31	6.33	6.85	7.00	7.45	7.42	7.23	8.62	8.09	7.92	7.65
General farm overhead	0.55	0.64	0.72	0.62	0.69	0.62	0.78	0.78	0.95	0.54	0.66	0.60
Taxes and insurance	0.37	0.40	0.40	0.38	0.42	0.42	0.40	0.40	0.48	0.45	0.43	0.45
Capital replacement	1.87	1.91	1.86	1.84	1.83	2.10	2.04	1.98	2.21	1.64	1.91	1.51
Operating capital	0.12	0.14	0.11	0.11	0.11	0.07	0.05	0.05	0.07	0.08	0.07	0.05
Other nonland capital	1.19	1.22	1.19	1.10	1.07	0.62	0.61	0.68	0.84	0.98	1.24	1.10
Land	0.42	0.44	0.43	0.44	0.43	0.15	0.10	0.09	0.16	0.36	0.36	0.37
Unpaid labor	1.70	1.80	1.97	1.79	1.96	1.98	2.06	2.08	2.08	2.06	2.23	2.26
Total, economic costs	12.43	12.86	13.01	13.13	13.51	13.41	13.46	13.29	15.42	14.20	14.82	13.99
Residual returns to management and risk	1.81	1.99	1.55	1.35	0.84	-0.01	-0.22	0.11	-2.16	0.91	0.59	-0.15

See footnotes at end of Table 57B.

Table 52A--Milk production cash costs and returns, per cow, Corn Belt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,606.46	1,755.65	1,756.94	1,791.97	1,775.04	1,533.37	1,546.12	1,622.19	1,642.54	1,862.55	1,940.11	1,725.36
Cattle	168.18	153.12	142.27	138.90	132.46	164.76	161.34	186.19	200.00	223.30	241.73	232.12
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.26	20.78	20.42
Total, gross value of production	1,774.64	1,908.77	1,899.21	1,930.87	1,907.50	1,698.13	1,707.46	1,808.38	1,842.54	2,103.11	2,202.62	1,977.90
Cash expenses:												
Feed--												
Concentrates	424.07	467.14	452.78	513.77	507.31	515.81	489.28	478.18	545.62	592.70	605.76	598.42
By-products						19.63	20.77	19.84	22.75	15.33	15.31	15.62
Hay	78.04	73.97	73.93	85.69	76.80	80.90	78.19	76.09	119.09	159.31	144.24	137.55
Silage	67.07	63.58	64.88	72.37	69.82	47.45	45.72	43.22	77.91	72.15	66.60	71.14
Pasture and other forage	9.58	9.08	7.85	7.73	7.93	9.45	9.65	8.72	10.53	19.17	17.64	19.33
Other--												
Milk hauling and marketing	68.12	75.26	75.01	76.61	76.89	77.83	69.85	79.34	81.29	88.92	95.32	91.41
Artificial insemination	13.79	15.57	16.80	17.24	17.82	14.06	13.89	14.34	14.65	15.12	15.31	14.55
Veterinary and medicine	24.41	25.95	27.67	28.70	29.75	39.75	40.78	41.88	42.48	37.83	38.31	36.39
Livestock hauling	1.57	1.30	1.84	1.76	1.73	6.44	6.01	5.98	6.10	2.34	1.85	2.15
Fuel, lube, and electricity	63.59	70.07	70.07	65.96	56.91	43.31	30.98	34.08	33.16	51.66	58.75	58.58
Machinery and building repairs	48.48	53.20	57.20	59.03	57.64	54.35	52.87	53.25	55.44	69.85	70.16	69.59
Hired labor	77.35	88.24	85.95	87.08	91.03	72.53	75.99	79.26	83.31	71.58	73.12	79.03
DHIA fees	6.13	6.49	7.47	7.62	7.91	6.81	6.73	6.99	7.18	8.73	9.20	9.55
Dairy supplies	24.21	25.95	25.95	26.69	27.25	26.82	25.66	26.33	27.84	31.46	32.60	32.99
Dairy assessment	0.00	0.00	0.00	64.35	66.72	15.90	45.20	24.77	4.07	0.00	0.72	7.18
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.83	8.59	8.33
Total, variable cash expenses	906.41	975.80	967.40	1,114.60	1,095.51	1,031.04	1,011.57	992.27	1,131.42	1,242.98	1,253.48	1,251.81
General farm overhead	57.93	69.59	87.01	60.15	78.17	68.66	63.53	75.37	78.98	62.16	77.51	72.00
Taxes and insurance	41.62	46.72	47.30	56.39	52.73	46.40	46.19	49.13	56.45	53.14	51.93	55.28
Interest	179.28	217.77	224.02	227.65	242.44	159.28	212.41	166.01	226.71	123.49	135.69	129.71
Total, fixed cash expenses	278.83	334.08	358.33	344.19	373.34	274.34	322.13	290.51	362.14	238.79	265.13	256.99
Total, cash expenses	1,185.24	1,309.88	1,325.73	1,458.79	1,468.85	1,305.38	1,333.70	1,282.78	1,493.56	1,481.77	1,518.61	1,508.80
Gross value of production less cash expenses	589.40	598.89	573.48	472.08	438.65	392.75	373.76	525.60	348.98	621.34	684.01	469.10
Pounds of milk per cow	12,624	12,977	13,139	13,397	13,344	12,234	12,555	13,036	13,569	13,930	14,478	14,366

Table 52B--Milk production economic costs and returns, per cow, Corn Belt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,606.46	1,755.65	1,756.94	1,791.97	1,775.04	1,533.37	1,546.12	1,622.19	1,642.54	1,862.55	1,940.11	1,725.36
Cattle	168.18	153.12	142.27	138.90	132.46	164.76	161.34	186.19	200.00	223.30	241.73	232.12
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.26	20.78	20.42
Total, gross value of production	1,774.64	1,908.77	1,899.21	1,930.87	1,907.50	1,698.13	1,707.46	1,808.38	1,842.54	2,103.11	2,202.62	1,977.90
Economic (full ownership) costs:												
Variable cash expenses	906.41	975.80	967.40	1,114.60	1,095.51	1,031.04	1,011.57	992.27	1,131.42	1,242.98	1,253.48	1,251.81
General farm overhead	57.93	69.59	87.01	60.15	78.17	68.66	63.53	75.37	78.98	62.16	77.51	72.00
Taxes and insurance	41.62	46.72	47.30	56.39	52.73	46.40	46.19	49.13	56.45	53.14	51.93	55.28
Capital replacement	234.93	246.54	236.50	250.19	241.63	230.38	227.15	235.02	261.14	249.25	296.21	239.28
Operating capital	17.14	20.76	16.83	17.06	16.61	10.17	7.05	7.76	10.10	12.47	11.72	8.56
Other nonland capital	153.67	160.90	153.73	152.26	140.03	72.32	72.33	85.00	106.39	127.57	165.09	148.88
Land	72.80	79.15	77.52	92.98	75.34	25.69	19.93	20.30	34.70	124.72	128.85	130.61
Unpaid labor	239.88	260.82	259.62	265.71	272.65	336.35	353.46	367.71	386.35	407.19	415.96	449.59
Total, economic costs	1,724.38	1,860.28	1,845.91	2,009.34	1,972.67	1,821.01	1,801.21	1,832.56	2,065.53	2,279.48	2,400.75	2,356.01
Residual returns to management and risk	50.26	48.49	53.30	-78.47	-65.17	-122.88	-93.75	-24.18	-222.99	-176.37	-198.13	-378.11
Pounds of milk per cow	12,624	12,977	13,139	13,397	13,344	12,234	12,555	13,036	13,569	13,930	14,478	14,366

See footnotes at end of Table 57B.

Table 53A--Milk production cash costs and returns, per cwt, Corn Belt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.75	13.53	13.37	13.37	13.29	12.53	12.32	12.44	12.11	13.37	13.40	12.01
Cattle	1.33	1.18	1.08	1.04	1.00	1.35	1.29	1.43	1.47	1.60	1.67	1.62
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	14.08	14.71	14.45	14.41	14.29	13.88	13.61	13.87	13.58	15.09	15.21	13.77
Cash expenses:												
Feed--												
Concentrates	3.37	3.60	3.45	3.84	3.80	4.23	3.91	3.68	4.06	4.25	4.18	4.17
By-products						0.16	0.17	0.16	0.18	0.11	0.11	0.11
Hay	0.62	0.57	0.56	0.64	0.58	0.68	0.64	0.60	0.90	1.14	1.00	0.96
Silage	0.53	0.49	0.49	0.54	0.52	0.38	0.36	0.32	0.56	0.52	0.46	0.50
Pasture and other forage	0.08	0.07	0.06	0.06	0.06	0.08	0.08	0.07	0.08	0.14	0.12	0.13
Other--												
Milk hauling and marketing	0.54	0.58	0.57	0.57	0.58	0.63	0.55	0.60	0.59	0.64	0.66	0.64
Artificial insemination	0.11	0.12	0.13	0.13	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.10
Veterinary and medicine	0.19	0.20	0.21	0.21	0.22	0.30	0.30	0.30	0.29	0.27	0.26	0.25
Livestock hauling	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.02	0.01	0.01
Fuel, lube, and electricity	0.50	0.54	0.53	0.49	0.43	0.36	0.25	0.26	0.25	0.37	0.41	0.41
Machinery and building repairs	0.38	0.41	0.44	0.44	0.43	0.45	0.43	0.41	0.41	0.50	0.48	0.48
Hired labor	0.61	0.68	0.65	0.66	0.69	0.59	0.61	0.61	0.61	0.51	0.51	0.55
DHIA fees	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.06	0.07
Dairy supplies	0.19	0.20	0.20	0.20	0.21	0.21	0.20	0.19	0.20	0.23	0.23	0.23
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.06
Total, variable cash expenses	7.18	7.52	7.36	8.33	8.22	8.42	8.07	7.60	8.37	8.92	8.67	8.72
General farm overhead	0.46	0.54	0.66	0.45	0.59	0.56	0.51	0.58	0.58	0.45	0.54	0.50
Taxes and insurance	0.33	0.36	0.36	0.40	0.38	0.38	0.37	0.38	0.42	0.38	0.36	0.38
Interest	1.42	1.68	1.71	1.70	1.82	1.30	1.69	1.27	1.67	0.89	0.94	0.90
Total, fixed cash expenses	2.21	2.58	2.73	2.55	2.79	2.24	2.57	2.23	2.67	1.72	1.84	1.78
Total, cash expenses	9.39	10.10	10.09	10.88	11.01	10.66	10.64	9.83	11.04	10.64	10.51	10.50
Gross value of production less cash expenses	4.69	4.61	4.36	3.53	3.28	3.22	2.97	4.04	2.54	4.45	4.70	3.27

Table 53B--Milk production economic costs and returns, per cwt, Corn Belt, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.75	13.53	13.37	13.37	13.29	12.53	12.32	12.44	12.11	13.37	13.40	12.01
Cattle	1.33	1.18	1.08	1.04	1.00	1.35	1.29	1.43	1.47	1.60	1.67	1.62
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	14.08	14.71	14.45	14.41	14.29	13.88	13.61	13.87	13.58	15.09	15.21	13.77
Economic (full ownership) costs:												
Variable cash expenses	7.18	7.52	7.36	8.33	8.22	8.42	8.07	7.60	8.37	8.92	8.67	8.72
General farm overhead	0.46	0.54	0.66	0.45	0.59	0.56	0.51	0.58	0.58	0.45	0.54	0.50
Taxes and insurance	0.33	0.36	0.36	0.40	0.38	0.38	0.37	0.38	0.42	0.38	0.36	0.38
Capital replacement	1.86	1.90	1.80	1.86	1.81	1.88	1.81	1.80	1.92	1.79	2.05	1.67
Operating capital	0.14	0.16	0.13	0.13	0.12	0.08	0.06	0.06	0.07	0.09	0.08	0.06
Other nonland capital	1.22	1.24	1.17	1.14	1.06	0.59	0.58	0.65	0.78	0.92	1.14	1.04
Land	0.58	0.61	0.59	0.69	0.56	0.21	0.16	0.16	0.26	0.90	0.89	0.91
Unpaid labor	1.90	2.01	1.98	1.98	2.04	2.75	2.82	2.82	2.85	2.92	2.87	3.13
Total, economic costs	13.67	14.34	14.05	14.98	14.78	14.88	14.36	14.05	15.26	16.37	16.60	16.41
Residual returns to management and risk	0.41	0.37	0.40	-0.57	-0.49	-1.00	-0.75	-0.18	-1.68	-1.28	-1.39	-2.64

See footnotes at end of Table 57B.

Table 54A--Milk production cash costs and returns, per cow, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,830.62	1,934.36	1,937.40	1,998.11	1,985.58	1,714.65	1,719.69	1,788.57	1,713.67	2,011.18	2,219.52	1,904.98
Cattle	147.23	135.93	123.24	124.30	116.07	142.79	139.52	167.00	177.65	186.79	204.03	197.32
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.90	7.10	6.98
Total, gross value of production	1,977.85	2,070.29	2,060.64	2,122.41	2,101.65	1,857.44	1,859.21	1,955.57	1,891.32	2,203.87	2,430.65	2,109.28
Cash expenses:												
Feed--												
Concentrates	616.14	673.10	616.00	600.00	632.09	609.67	558.09	517.69	605.30	677.25	688.98	733.84
By-products						15.98	17.09	16.54	17.35	111.17	114.23	111.80
Hay	237.16	224.80	222.98	259.19	331.82	245.69	207.90	208.56	261.07	211.94	220.29	194.83
Silage	20.69	19.61	19.66	21.41	27.97	14.01	15.47	12.59	17.85	76.91	76.93	64.84
Pasture and other forage	5.52	5.23	5.04	4.91	5.01	17.05	17.37	15.10	18.98	22.71	21.12	23.89
Other--												
Milk hauling and marketing	84.29	90.18	79.62	82.68	86.09	96.92	94.84	94.00	96.07	103.20	113.81	113.07
Artificial insemination	8.95	10.46	10.84	11.17	11.50	16.77	16.58	17.17	17.65	5.62	5.69	5.41
Veterinary and medicine	16.41	18.30	18.38	19.14	19.71	9.86	10.11	10.35	10.62	24.63	24.95	23.69
Livestock hauling	0.85	1.31	0.98	0.95	0.92	2.93	2.73	2.73	2.79	1.78	1.41	1.63
Fuel, lube, and electricity	36.92	40.52	40.31	38.02	34.57	28.61	20.65	22.74	22.63	28.55	32.52	33.03
Machinery and building repairs	20.26	22.22	24.18	25.19	24.30	31.17	30.10	30.64	32.26	42.97	43.16	42.81
Hired labor	128.97	150.30	160.85	156.09	147.29	162.06	168.52	174.29	174.63	170.94	170.94	176.05
DHIA fees	1.70	2.61	2.02	2.08	2.14	8.99	8.89	9.21	9.46	3.50	3.69	3.83
Dairy supplies	37.29	39.21	39.65	40.98	41.65	25.37	24.19	24.70	26.38	40.44	41.91	42.40
Dairy assessment	0.00	0.00	0.00	66.14	69.43	16.15	45.52	24.81	3.89	0.00	0.75	7.50
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.61	2.54
Total, variable cash expenses	1,215.15	1,297.85	1,240.51	1,327.95	1,434.49	1,301.23	1,238.05	1,181.12	1,316.93	1,523.69	1,562.99	1,581.16
Total, cash expenses	1,429.26	1,548.18	1,517.53	1,573.78	1,710.07	1,594.13	1,444.76	1,382.35	1,564.27	1,686.90	1,744.12	1,756.67
General farm overhead	57.12	66.77	97.58	60.84	59.53	66.87	59.12	78.42	114.63	40.97	51.09	47.46
Taxes and insurance	31.56	35.29	34.50	35.78	32.79	39.91	39.94	42.24	46.71	35.20	34.40	36.62
Interest	125.43	148.27	144.94	149.21	183.26	186.12	107.65	80.57	86.00	87.04	95.64	91.43
Total, fixed cash expenses	214.11	250.33	277.02	245.83	275.58	292.90	206.71	201.23	247.34	163.21	181.13	175.51
Gross value of production less cash expenses	548.59	522.11	543.11	548.63	391.58	263.31	414.45	573.22	327.05	516.97	686.53	352.61
Pounds of milk per cow	13,204	13,070	13,270	13,780	13,885	12,425	12,645	13,055	12,982	14,064	15,099	15,000

Table 54B--Milk production economic costs and returns, per cow, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,830.62	1,934.36	1,937.40	1,998.11	1,985.58	1,714.65	1,719.69	1,788.57	1,713.67	2,011.18	2,219.52	1,904.98
Cattle	147.23	135.93	123.24	124.30	116.07	142.79	139.52	167.00	177.65	186.79	204.03	197.32
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.90	7.10	6.98
Total, gross value of production	1,977.85	2,070.29	2,060.64	2,122.41	2,101.65	1,857.44	1,859.21	1,955.57	1,891.32	2,203.87	2,430.65	2,109.28
Economic (full ownership) costs:												
Variable cash expenses	1,215.15	1,297.85	1,240.51	1,327.95	1,434.49	1,301.23	1,238.05	1,181.12	1,316.93	1,523.69	1,562.99	1,581.16
General farm overhead	57.12	66.77	97.58	60.84	59.53	66.87	59.12	78.42	114.63	40.97	51.09	47.46
Taxes and insurance	31.56	35.29	34.50	35.78	32.79	39.91	39.94	42.24	46.71	35.20	34.40	36.62
Capital replacement	155.03	162.07	163.22	160.46	159.01	123.01	120.90	122.50	135.95	187.12	222.37	179.64
Operating capital	19.43	23.53	18.57	17.44	18.69	12.46	8.36	8.93	11.39	15.29	14.60	10.81
Other nonland capital	87.72	91.49	94.22	88.90	84.58	46.60	46.55	54.55	69.03	56.73	73.42	66.21
Land	26.04	26.14	31.85	28.83	35.00	33.57	26.25	23.31	28.53	11.40	11.91	12.14
Unpaid labor	90.15	98.02	105.39	101.97	98.95	104.54	108.66	112.38	112.60	117.20	117.20	120.71
Total, economic costs	1,680.20	1,801.16	1,785.84	1,822.17	1,923.04	1,728.19	1,647.83	1,623.45	1,835.77	1,987.60	2,087.98	2,054.75
Residual returns to management and risk	297.65	269.13	274.80	300.24	178.61	129.25	211.38	332.12	55.55	216.27	342.67	54.53
Pounds of milk per cow	13,204	13,070	13,270	13,780	13,885	12,425	12,645	13,055	12,982	14,064	15,099	15,000

See footnotes at end of Table 57B.

Table 55A--Milk production cash costs and returns, per cwt, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.90	14.80	14.60	14.50	14.30	13.80	13.60	13.70	13.20	14.30	14.70	12.70
Cattle	1.12	1.04	0.93	0.90	0.84	1.15	1.10	1.28	1.37	1.33	1.35	1.32
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.05
Total, gross value of production	15.02	15.84	15.53	15.40	15.14	14.95	14.70	14.98	14.57	15.67	16.10	14.07
Cash expenses:												
Feed--												
Concentrates	4.68	5.15	4.64	4.35	4.55	4.91	4.41	3.97	4.66	4.82	4.56	4.89
By-products						0.13	0.13	0.14	0.13	0.79	0.75	0.75
Hay	1.80	1.72	1.68	1.88	2.39	1.98	1.64	1.60	2.01	1.51	1.46	1.30
Silage	0.15	0.15	0.15	0.16	0.20	0.11	0.12	0.10	0.14	0.55	0.51	0.43
Pasture and other forage	0.04	0.04	0.04	0.04	0.04	0.14	0.14	0.12	0.15	0.16	0.14	0.16
Other--												
Milk hauling and marketing	0.64	0.69	0.60	0.60	0.62	0.78	0.75	0.72	0.74	0.73	0.75	0.75
Artificial insemination	0.07	0.08	0.08	0.08	0.08	0.14	0.13	0.13	0.14	0.04	0.04	0.04
Veterinary and medicine	0.12	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.08	0.18	0.17	0.16
Livestock hauling	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Fuel, lube, and electricity	0.28	0.31	0.30	0.28	0.24	0.23	0.16	0.17	0.17	0.20	0.22	0.22
Machinery and building repairs	0.15	0.17	0.18	0.18	0.17	0.25	0.24	0.23	0.25	0.31	0.29	0.29
Hired labor	0.98	1.15	1.21	1.13	1.06	1.30	1.33	1.34	1.35	1.22	1.13	1.17
DHIA fees	0.01	0.02	0.02	0.02	0.02	0.07	0.07	0.07	0.07	0.02	0.02	0.03
Dairy supplies	0.28	0.30	0.30	0.30	0.30	0.20	0.19	0.19	0.20	0.29	0.28	0.28
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
Total, variable cash expenses	9.21	9.93	9.35	9.65	10.32	10.47	9.78	9.06	10.14	10.84	10.37	10.55
General farm overhead	0.43	0.51	0.73	0.44	0.43	0.54	0.47	0.60	0.88	0.29	0.34	0.32
Taxes and insurance	0.24	0.27	0.26	0.25	0.22	0.32	0.32	0.32	0.36	0.25	0.23	0.24
Interest	0.95	1.13	1.09	1.08	1.32	1.50	0.85	0.62	0.66	0.62	0.63	0.61
Total, fixed cash expenses	1.62	1.91	2.08	1.77	1.97	2.36	1.64	1.54	1.90	1.16	1.20	1.17
Total, cash expenses	10.83	11.84	11.43	11.42	12.29	12.83	11.42	10.60	12.04	12.00	11.57	11.72
Gross value of production less cash expenses	4.19	4.00	4.10	3.98	2.85	2.12	3.28	4.38	2.53	3.67	4.53	2.35

Table 55B--Milk production economic costs and returns, per cwt, Southern Plains, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	13.90	14.80	14.60	14.50	14.30	13.80	13.60	13.70	13.20	14.30	14.70	12.70
Cattle	1.12	1.04	0.93	0.90	0.84	1.15	1.10	1.28	1.37	1.33	1.35	1.32
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.05
Total, gross value of production	15.02	15.84	15.53	15.40	15.14	14.95	14.70	14.98	14.57	15.67	16.10	14.07
Economic (full ownership) costs:												
Variable cash expenses	9.21	9.93	9.35	9.65	10.32	10.47	9.78	9.06	10.14	10.84	10.37	10.55
General farm overhead	0.43	0.51	0.73	0.44	0.43	0.54	0.47	0.60	0.88	0.29	0.34	0.32
Taxes and insurance	0.24	0.27	0.26	0.25	0.22	0.32	0.32	0.32	0.36	0.25	0.23	0.24
Capital replacement	1.17	1.24	1.23	1.16	1.15	0.99	0.96	0.94	1.05	1.33	1.47	1.20
Operating capital	0.15	0.18	0.14	0.12	0.13	0.10	0.07	0.07	0.09	0.11	0.10	0.07
Other nonland capital	0.66	0.70	0.71	0.65	0.62	0.38	0.37	0.42	0.53	0.40	0.49	0.44
Land	0.18	0.20	0.24	0.21	0.25	0.27	0.21	0.18	0.22	0.08	0.08	0.08
Unpaid labor	0.68	0.75	0.79	0.74	0.71	0.84	0.86	0.86	0.87	0.83	0.78	0.80
Total, economic costs	12.72	13.78	13.45	13.22	13.83	13.91	13.03	12.44	14.13	14.13	13.86	13.70
Residual returns to management and risk	2.30	2.06	2.08	2.18	1.31	1.04	1.68	2.54	0.43	1.54	2.24	0.37

See footnotes at end of Table 57B.

Table 56A--Milk production cash costs and returns, per cow, Pacific, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,996.88	2,126.81	2,103.61	2,114.54	2,120.16	1,912.41	1,894.85	1,943.73	1,816.84	2,142.40	2,185.87	2,014.75
Cattle	162.22	146.95	136.99	136.67	135.51	146.23	140.06	173.63	186.73	168.57	183.26	172.41
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.81	25.06	24.62
Total, gross value of production	2,159.10	2,273.76	2,240.60	2,251.21	2,255.67	2,058.64	2,034.91	2,117.36	2,003.57	2,331.78	2,394.19	2,211.78
Cash expenses:												
Feed--												
Concentrates	586.35	567.26	529.74	561.42	568.60	488.79	477.12	461.30	487.34	591.91	617.37	589.01
By-products						88.41	80.50	75.47	95.21	131.46	144.11	147.18
Hay	361.74	342.88	351.21	391.19	359.60	410.28	358.04	350.97	415.76	309.39	329.72	259.30
Silage	45.00	42.66	44.48	45.40	45.23	52.05	46.19	43.17	51.16	130.18	138.13	111.72
Pasture and other forage	5.00	4.74	4.70	4.69	4.82	10.63	9.52	8.11	8.68	20.80	24.34	20.65
Other--												
Milk hauling and marketing	65.53	69.52	72.84	74.11	76.69	77.20	70.68	69.67	67.99	86.82	94.38	92.55
Artificial insemination	14.46	17.38	17.54	18.08	18.57	13.45	13.30	13.78	14.16	17.79	18.02	17.11
Veterinary and medicine	19.82	22.12	22.26	23.20	23.81	26.26	26.75	27.40	28.14	23.43	23.73	22.54
Livestock hauling	1.93	1.58	2.23	2.15	2.09	2.17	2.02	2.00	2.06	3.31	2.62	3.04
Fuel, lube, and electricity	35.50	37.92	36.91	33.84	29.63	32.88	24.88	26.96	27.17	45.11	49.95	50.55
Machinery and building repairs	52.78	61.63	64.25	66.92	64.32	57.67	55.20	56.28	59.78	63.17	63.45	62.94
Hired labor	134.38	142.21	151.21	155.92	167.14	159.10	163.85	172.65	175.59	192.61	193.78	197.60
DHIA fees	7.19	7.90	8.66	8.93	9.19	8.10	8.01	8.31	8.52	8.32	8.77	9.10
Dairy supplies	25.97	28.44	27.67	28.61	28.99	30.02	28.48	29.04	31.10	28.59	29.63	29.98
Dairy assessment	0.00	0.00	0.00	0.00	82.19	20.36	57.73	31.96	4.89	0.00	0.90	8.89
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.05	15.15	14.70
Total, variable cash expenses	1,355.65	1,346.24	1,333.70	1,491.90	1,480.87	1,477.37	1,422.27	1,377.07	1,477.55	1,664.94	1,754.05	1,636.86
General farm overhead	44.15	51.93	56.18	48.18	61.83	49.21	38.07	66.37	81.84	43.21	53.88	50.05
Taxes and insurance	23.83	25.28	23.86	25.32	24.17	27.84	27.35	28.98	29.96	35.45	34.65	36.88
Interest	144.97	172.42	187.40	188.20	166.92	161.60	137.56	79.40	112.54	103.63	113.87	108.85
Total, fixed cash expenses	212.95	249.63	267.44	261.70	252.92	238.65	202.98	174.75	224.34	182.29	202.40	195.78
Total, cash expenses	1,568.60	1,595.87	1,601.14	1,753.60	1,733.79	1,716.02	1,625.25	1,551.82	1,701.89	1,847.23	1,956.45	1,832.64
Gross value of production less cash expenses	590.50	677.89	639.46	497.61	521.88	342.62	409.66	565.54	301.68	484.55	437.74	379.14
Pounds of milk per cow	15,548	15,801	15,904	16,133	16,439	15,665	16,036	16,819	16,311	17,132	17,917	17,782

Table 56B--Milk production economic costs and returns, per cow, Pacific, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	1,996.88	2,126.81	2,103.61	2,114.54	2,120.16	1,912.41	1,894.85	1,943.73	1,816.84	2,142.40	2,185.87	2,014.75
Cattle	162.22	146.95	136.99	136.67	135.51	146.23	140.06	173.63	186.73	168.57	183.26	172.41
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.81	25.06	24.62
Total, gross value of production	2,159.10	2,273.76	2,240.60	2,251.21	2,255.67	2,058.64	2,034.91	2,117.36	2,003.57	2,331.78	2,394.19	2,211.78
Economic (full ownership) costs:												
Variable cash expenses	1,355.65	1,346.24	1,333.70	1,491.90	1,480.87	1,477.37	1,422.27	1,377.07	1,477.55	1,664.94	1,754.05	1,636.86
General farm overhead	44.15	51.93	56.18	48.18	61.83	49.21	38.07	66.37	81.84	43.21	53.88	50.05
Taxes and insurance	23.83	25.28	23.86	25.32	24.17	27.84	27.35	28.98	29.96	35.45	34.65	36.88
Capital replacement	129.03	127.99	124.05	127.57	124.73	112.65	108.18	110.06	118.02	127.00	150.93	121.92
Operating capital	20.87	25.28	19.32	19.25	18.98	14.53	9.88	10.74	13.16	16.66	16.38	11.18
Other nonland capital	110.17	109.03	104.97	101.31	94.69	48.96	47.35	56.59	69.88	49.92	64.61	58.26
Land	10.17	11.06	11.13	11.45	8.10	14.29	11.48	9.45	9.20	40.60	41.07	41.85
Unpaid labor	52.31	56.88	60.77	64.59	68.39	61.24	61.96	67.40	67.73	72.18	72.62	74.05
Total, economic costs	1,746.18	1,753.69	1,733.98	1,889.57	1,881.76	1,806.09	1,726.54	1,726.66	1,867.34	2,049.96	2,188.19	2,031.05
Residual returns to management and risk	412.92	520.07	506.62	361.64	373.91	252.55	308.37	390.70	136.23	281.82	206.00	180.73
Pounds of milk per cow	15,548	15,801	15,904	16,133	16,439	15,665	16,036	16,819	16,311	17,132	17,917	17,782

See footnotes at end of Table 57B.

Table 57A--Milk production cash costs and returns, per cwt, Pacific, 1980-91

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.85	13.46	13.23	13.10	12.89	12.21	11.82	11.56	11.14	12.51	12.20	11.33
Cattle	1.04	0.93	0.86	0.85	0.82	0.93	0.87	1.03	1.14	0.98	1.02	0.97
Other income 1/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	13.89	14.39	14.09	13.95	13.71	13.14	12.69	12.59	12.28	13.61	13.36	12.44
Cash expenses:												
Feed--												
Concentrates	3.77	3.59	3.33	3.48	3.46	3.13	2.97	2.74	2.99	3.45	3.45	3.31
By-products						0.57	0.51	0.45	0.59	0.77	0.80	0.83
Hay	2.33	2.17	2.21	2.43	2.19	2.62	2.24	2.08	2.55	1.81	1.84	1.46
Silage	0.29	0.27	0.28	0.28	0.27	0.33	0.29	0.26	0.31	0.76	0.77	0.63
Pasture and other forage	0.03	0.03	0.03	0.03	0.03	0.07	0.06	0.05	0.05	0.12	0.14	0.12
Other--												
Milk hauling and marketing	0.42	0.44	0.46	0.46	0.47	0.50	0.44	0.42	0.42	0.51	0.53	0.52
Artificial insemination	0.09	0.11	0.11	0.11	0.11	0.09	0.08	0.08	0.09	0.10	0.10	0.10
Veterinary and medicine	0.13	0.14	0.14	0.14	0.14	0.17	0.17	0.16	0.17	0.14	0.13	0.13
Livestock hauling	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02
Fuel, lube, and electricity	0.23	0.24	0.23	0.21	0.18	0.21	0.16	0.16	0.17	0.26	0.28	0.28
Machinery and building repairs	0.34	0.39	0.41	0.34	0.39	0.37	0.34	0.37	0.37	0.37	0.35	0.35
Hired labor	0.86	0.90	0.95	0.96	1.02	1.02	1.02	1.03	1.08	1.12	1.08	1.11
DHIA fees	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Dairy supplies	0.17	0.18	0.18	0.18	0.18	0.19	0.18	0.18	0.19	0.17	0.17	0.17
Dairy assessment	0.00	0.00	0.00	0.48	0.50	0.13	0.36	0.19	0.03	0.00	0.01	0.05
Other variable cash expenses 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.08
Total, variable cash expenses	8.72	8.52	8.39	9.24	9.01	9.46	8.89	8.20	9.07	9.72	9.79	9.21
General farm overhead	0.28	0.33	0.36	0.30	0.38	0.32	0.24	0.40	0.50	0.25	0.30	0.28
Taxes and insurance	0.15	0.16	0.15	0.16	0.14	0.18	0.17	0.18	0.19	0.21	0.19	0.21
Interest	0.93	1.09	1.18	1.17	1.01	1.03	0.86	0.47	0.69	0.60	0.64	0.61
Total, fixed cash expenses	1.36	1.58	1.69	1.63	1.53	1.53	1.27	1.05	1.38	1.06	1.13	1.10
Total, cash expenses	10.08	10.10	10.08	10.87	10.54	10.99	10.16	9.25	10.45	10.78	10.92	10.31
Gross value of production less cash expenses	3.81	4.29	4.01	3.08	3.17	2.16	2.53	3.34	1.84	2.83	2.44	2.13

Table 57B--Milk production economic costs and returns, per cwt, Pacific, 1980-91

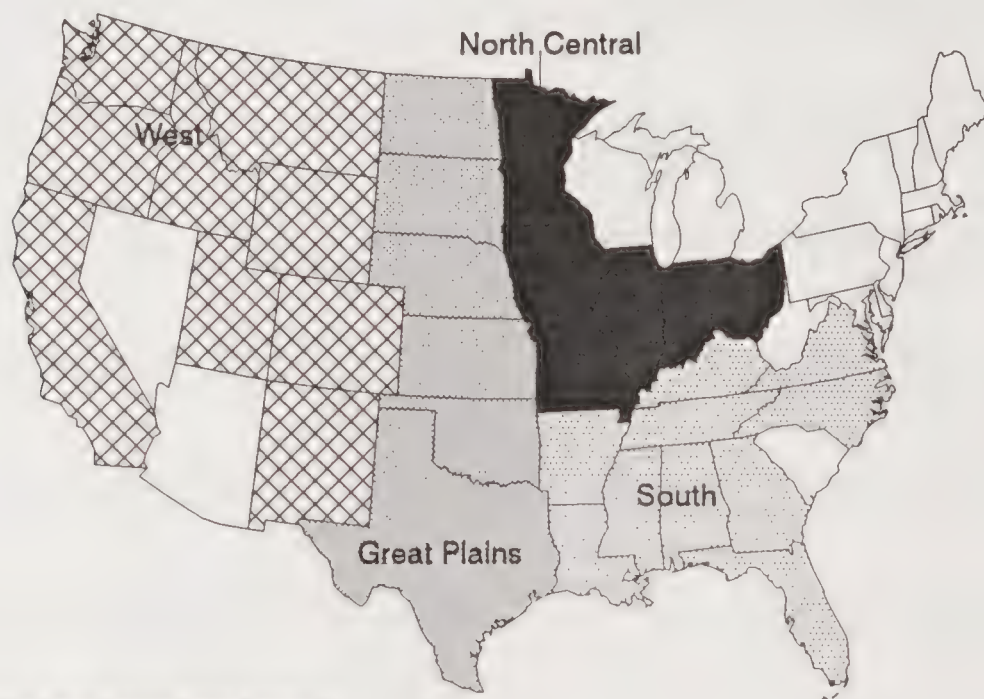
Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dollars												
Gross value of production:												
Milk	12.85	13.46	13.23	13.10	12.89	12.21	11.82	11.56	11.14	12.51	12.20	11.33
Cattle	1.04	0.93	0.86	0.85	0.82	0.93	0.87	1.03	1.14	0.98	1.02	0.97
Other income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.14	0.14
Total, gross value of production	13.89	14.39	14.09	13.95	13.71	13.14	12.69	12.59	12.28	13.61	13.36	12.44
Economic (full ownership) costs:												
Variable cash expenses	8.72	8.52	8.39	9.24	9.01	9.46	8.89	8.20	9.07	9.72	9.79	9.21
General farm overhead	0.28	0.33	0.36	0.30	0.38	0.32	0.24	0.40	0.50	0.25	0.30	0.28
Taxes and insurance	0.15	0.16	0.15	0.16	0.14	0.18	0.17	0.18	0.19	0.21	0.19	0.21
Capital replacement	0.83	0.81	0.78	0.79	0.76	0.72	0.67	0.65	0.72	0.74	0.84	0.69
Operating capital	0.13	0.16	0.12	0.12	0.12	0.09	0.06	0.06	0.08	0.10	0.09	0.06
Other nonland capital	0.71	0.69	0.66	0.62	0.57	0.31	0.30	0.34	0.43	0.29	0.36	0.33
Land	0.07	0.07	0.07	0.07	0.05	0.09	0.07	0.06	0.06	0.24	0.23	0.24
Unpaid labor	0.34	0.36	0.38	0.39	0.41	0.39	0.39	0.40	0.42	0.42	0.41	0.42
Total, economic costs	11.23	11.10	10.91	11.69	11.44	11.56	10.79	10.29	11.46	11.97	12.21	11.44
Residual returns to management and risk	2.66	3.29	3.18	2.26	2.27	1.58	1.90	2.30	0.82	1.64	1.15	1.00

1/ Includes the dairy enterprise share of receipts from cooperative patronage dividends, assessment refunds, renting or leasing of dairy animals, manure sales, and insurance indemnity payments. 2/ Includes the dairy enterprise share of expenses for bedding and litter, and custom manure hauling and disposal.

Note: Survey base changed in 1989.

Figure 25

Cow-Calf Production Regions

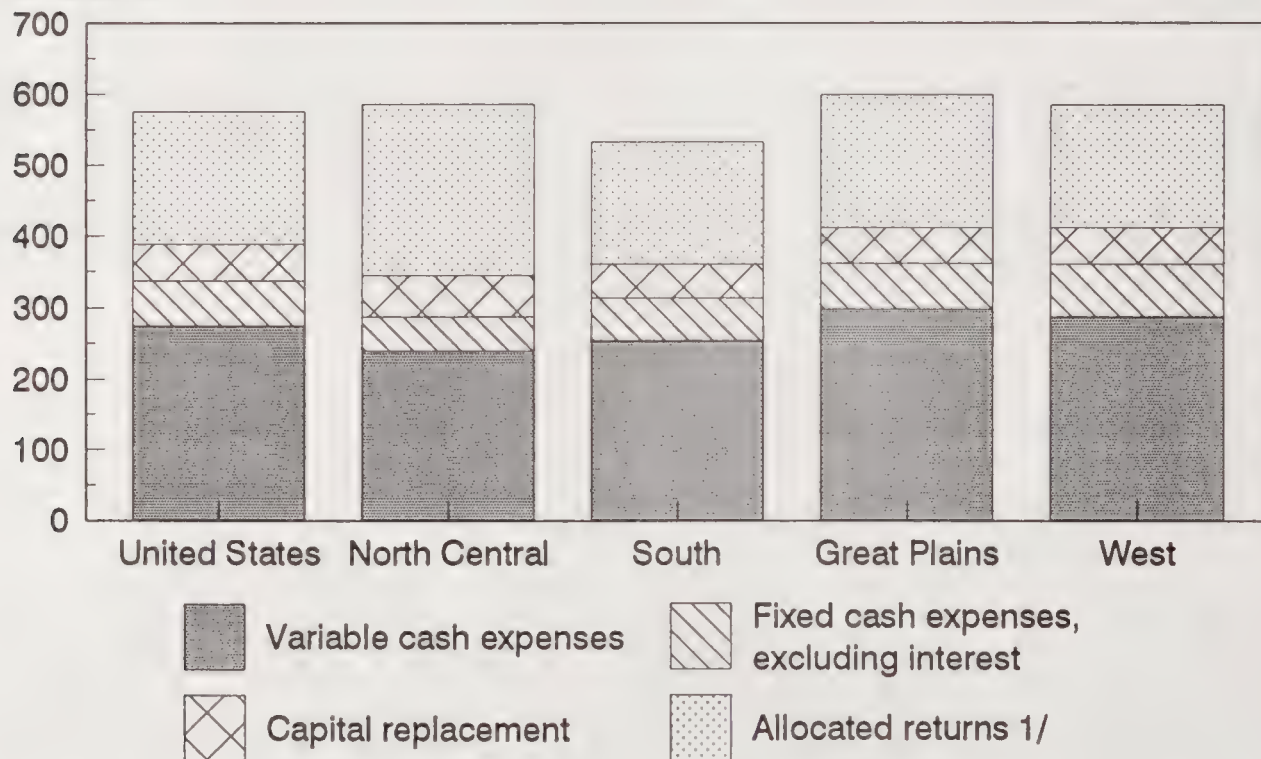


Producers in the States shaded were surveyed about production practices and costs of production. Production regions for each commodity are based on common cultural practices.

Figure 26

Cow-calf production economic costs, 1991

Dollars/cow



1/ Income forgone by allocating resources owned by the operation (operating and other nonland capital, land, and unpaid labor) to cow-calf production rather than some other income-producing use.

Table 58A--U.S. cow-calf production cash costs and returns, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	61.37	69.14
Heifer calves	51.30	53.82
Yearling steers	127.32	127.84
Yearling heifers	72.12	72.80
Other cattle	119.91	124.06
Total, gross value of production	432.02	447.66
Cash expenses:		
Feeder cattle	18.36	18.31
Feed--		
Grain	3.51	4.91
Protein supplements	23.88	23.47
By-products	7.58	7.41
Harvested forages	78.77	72.91
Pasture	47.14	42.10
Total feed costs	160.88	150.80
Other--		
Veterinary and medicine	11.91	11.31
Livestock hauling	1.78	2.07
Marketing	7.13	7.19
Custom feed mixing	0.43	0.64
Fuel, lube	21.85	23.23
Machinery and building repairs	29.55	29.14
Hired labor	23.92	25.56
Other variable cash expenses	6.11	6.16
Total, variable cash expenses	281.92	274.41
General farm overhead	34.28	25.71
Taxes and insurance	43.85	37.51
Interest	38.61	30.37
Total, fixed cash expenses	116.74	93.59
Total, cash expenses	398.66	368.00
Gross value of production less cash expenses	33.36	79.66

Table 58B--U.S. cow-calf production economic costs and returns, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	61.37	69.14
Heifer calves	51.30	53.82
Yearling steers	127.32	127.84
Yearling heifers	72.12	72.80
Other cattle	119.91	124.06
Total, gross value of production	432.02	447.66
Economic (full ownership) costs:		
Variable cash expenses	281.92	274.41
General farm overhead	34.28	25.71
Taxes and insurance	43.85	37.51
Capital replacement	97.84	79.25
Operating capital	15.79	11.20
Other nonland capital	32.34	29.24
Land	53.81	54.27
Unpaid labor	83.93	88.51
Total, economic costs	643.76	600.10
Residual returns to management and risk	-211.74	-152.44

Note: 1990 and 1991 estimates were based on a revised methodology and are not directly comparable with results for previous years.

Table 58C--U.S. cow-calf production cash costs and returns, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	90.02	74.86	74.22	74.62	76.37	77.71	78.17	94.86	106.29	109.95
Heifer calves	53.27	44.02	44.25	43.80	44.36	46.22	47.81	59.82	68.24	70.06
Yearling steers	78.40	67.72	64.73	61.23	65.89	61.52	66.69	79.68	88.81	93.41
Yearling heifers	49.24	44.08	42.19	38.89	41.47	40.30	43.97	54.42	60.44	62.68
Other cattle	35.98	29.96	30.10	28.64	30.69	28.64	28.83	34.61	35.91	36.05
Total, gross value of production	306.91	260.64	255.49	247.18	258.78	254.39	265.47	323.39	359.69	372.15
Cash expenses:										
Feed--										
Grain	10.12	9.42	8.31	10.70	11.20	9.39	7.62	6.54	9.49	9.85
Silage	4.58	5.51	4.66	6.20	5.83	6.04	5.55	5.09	7.00	4.66
Protein supplements	17.28	18.21	17.26	18.13	18.69	16.00	15.83	15.97	18.64	20.30
Salt and minerals	2.13	2.41	2.40	2.52	2.62	2.69	1.96	1.98	1.98	2.07
Hay	32.03	40.23	41.47	38.99	43.34	42.96	33.34	31.77	44.02	34.58
Pasture	35.81	37.40	39.02	36.45	39.30	36.44	34.47	31.78	34.89	39.62
Public grazing	0.68	0.76	0.75	0.65	0.71	0.66	0.69	0.71	0.75	0.88
Crop residue (purchased)	0.07	0.07	0.07	0.08	0.08	0.07	0.09	0.07	0.08	0.10
Total feed costs	102.70	114.01	113.94	113.72	121.77	114.25	99.55	93.91	116.85	112.06
Other--										
Veterinary and medicine	5.05	5.52	5.91	6.11	6.31	6.38	6.60	6.72	6.91	7.52
Livestock hauling	1.40	1.75	1.70	1.74	1.80	1.85	1.86	1.85	1.89	2.01
Marketing	3.81	3.86	3.90	4.00	4.10	4.21	4.16	4.24	4.54	4.98
Custom feed mixing	0.42	0.44	0.49	0.47	0.48	0.49	0.48	0.49	0.52	0.60
Fuel, lube, electricity	19.23	21.72	21.30	19.54	16.58	16.00	11.90	12.76	12.71	14.94
Machinery and building repairs	17.60	19.31	21.17	22.09	21.58	22.51	21.71	21.83	22.81	23.58
Hired labor	11.72	13.41	13.02	13.48	13.72	13.98	14.40	14.47	15.06	17.40
Total, variable cash expenses	161.93	180.02	181.43	181.15	186.34	179.67	160.66	156.27	181.29	183.09
General farm overhead	21.94	20.68	19.47	19.26	24.13	22.43	29.20	38.81	25.01	26.33
Taxes and insurance	20.52	19.62	20.87	23.43	19.54	19.04	24.06	29.04	30.05	30.08
Interest	47.50	44.86	45.43	44.96	46.52	44.30	39.82	42.04	49.88	47.98
Total, fixed cash expenses	89.96	85.16	85.77	87.65	90.19	85.77	93.08	109.89	104.94	104.39
Total, cash expenses	251.89	265.18	267.20	268.80	276.53	265.44	253.74	266.16	286.23	287.48
Gross value of production less cash expenses	55.02	-4.54	-11.71	-21.62	-17.75	-11.05	11.73	57.23	73.46	84.67

Table 58D--U.S. cow-calf production economic costs and returns, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	90.02	74.86	74.22	74.62	76.37	77.71	78.17	94.86	106.29	109.95
Heifer calves	53.27	44.02	44.25	43.80	44.36	46.22	47.81	59.82	68.24	70.06
Yearling steers	78.40	67.72	64.73	61.23	65.89	61.52	66.69	79.68	88.81	93.41
Yearling heifers	49.24	44.08	42.19	38.89	41.47	40.30	43.97	54.42	60.44	62.68
Other cattle	35.98	29.96	30.10	28.64	30.69	28.64	28.83	34.61	35.91	36.05
Total, gross value of production	306.91	260.64	255.49	247.18	258.78	254.39	265.47	323.39	359.69	372.15
Economic (full ownership) costs:										
Variable cash expenses	161.93	180.02	181.43	181.15	186.34	179.67	160.66	156.27	181.29	183.09
General farm overhead	21.94	20.68	19.47	19.26	24.13	22.43	29.20	38.81	25.01	26.33
Taxes and insurance	20.52	19.62	20.87	23.43	19.54	19.04	24.06	29.04	30.05	30.08
Capital replacement	54.19	59.22	62.88	64.28	64.46	64.53	63.37	64.82	66.62	67.38
Operating capital	9.21	12.40	10.05	7.93	9.13	6.88	4.34	4.73	6.27	7.36
Other nonland capital	34.17	32.29	31.55	29.67	23.61	22.36	23.05	26.79	29.93	31.95
Land	92.95	94.57	92.86	83.72	66.15	54.86	56.21	65.50	74.35	82.19
Unpaid labor	65.29	72.11	71.71	74.68	76.73	78.27	82.56	82.30	87.05	89.39
Total, economic costs	460.20	490.91	490.82	484.12	470.09	448.04	443.45	468.26	500.57	517.77
Residual returns to management and risk	-153.29	-230.27	-235.33	-236.94	-211.31	-193.65	-177.98	-144.87	-140.88	-145.62

Table 59A--Cow-calf production cash costs and returns,
North Central, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	49.23	56.18
Heifer calves	32.73	33.98
Yearling steers	133.06	134.56
Yearling heifers	86.33	87.07
Other cattle	123.02	126.33
Total, gross value of production	424.37	438.12
Cash expenses:		
Feeder cattle	2.26	2.38
Feed--		
Grain	3.40	5.10
Protein supplements	20.40	20.61
By-products	4.58	4.71
Harvested forages	63.86	68.27
Pasture	47.40	42.23
Total feed costs	139.64	140.92
Other--		
Veterinary and medicine	14.10	15.60
Livestock hauling	0.59	0.69
Marketing	5.46	5.51
Custom feed mixing	0.25	0.37
Fuel, lube, electricity	26.84	27.98
Machinery and building repairs	28.36	25.67
Hired labor	14.03	14.65
Other variable cash expenses	5.28	5.26
Total, variable cash expenses	236.81	239.03
General farm overhead	28.11	21.13
Taxes and insurance	31.75	26.79
Interest	38.20	30.15
Total, fixed cash expenses	98.06	78.07
Total, cash expenses	334.87	317.10
Gross value of production less cash expenses	89.50	121.02

Table 59B--Cow-calf production economic costs and returns,
North Central, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	49.23	56.18
Heifer calves	32.73	33.98
Yearling steers	133.06	134.56
Yearling heifers	86.33	87.07
Other cattle	123.02	126.33
Total, gross value of production	424.37	438.12
Economic (full ownership) costs:		
Variable cash expenses	236.81	239.03
General farm overhead	28.11	21.13
Taxes and insurance	31.75	26.79
Capital replacement	109.00	88.29
Operating capital	13.27	9.75
Other nonland capital	41.49	37.52
Land	65.96	62.72
Unpaid labor	117.56	126.61
Total, economic costs	643.95	611.84
Residual returns to management and risk	-219.58	-173.72

Note: 1990 and 1992 estimates were based on a revised methodology and are not directly comparable with results for previous years.

Table 59C--Cow-calf production cash costs and returns, North Central, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	96.67	79.36	79.81	81.05	82.15	79.25	84.03	101.84	114.24	116.73
Heifer calves	50.67	40.53	40.42	41.30	40.99	40.84	44.03	55.03	62.76	63.66
Yearling steers	79.07	69.02	58.19	62.55	62.75	65.88	59.93	71.98	79.93	86.48
Yearling heifers	59.73	51.91	43.41	46.66	47.05	49.34	45.03	56.01	62.01	64.43
Other cattle	43.66	34.80	35.14	35.64	39.77	34.46	36.70	44.23	45.96	47.76
Total, gross value of production	329.80	275.62	256.97	267.20	272.71	269.77	269.72	329.09	364.90	379.06
Cash expenses:										
Feed--										
Grain	12.27	11.89	9.50	12.23	12.36	10.42	8.12	6.47	9.41	10.09
Silage	7.48	9.83	8.05	10.54	8.95	9.00	7.80	7.26	14.13	10.34
Protein supplements	12.53	12.76	12.18	13.11	12.79	11.40	12.45	12.48	14.53	16.63
Salt and minerals	3.20	3.60	3.81	3.89	3.99	4.08	1.99	2.01	2.02	2.10
Hay	41.16	47.00	47.38	45.21	56.48	46.07	40.33	41.26	67.66	53.27
Pasture	14.90	16.39	16.59	16.14	17.34	14.36	14.11	12.61	14.79	17.24
Total feed costs	91.54	101.47	97.51	101.12	111.91	95.33	84.80	82.09	122.54	109.67
Other--										
Veterinary and medicine	5.04	5.50	5.76	5.96	6.08	6.14	6.30	6.43	6.62	7.44
Livestock hauling	1.54	1.76	1.88	1.95	2.02	2.09	2.03	2.02	2.07	2.11
Marketing	3.10	2.71	2.57	2.67	2.75	2.72	2.71	2.77	2.96	3.21
Custom feed mixing	0.10	0.11	0.11	0.12	0.13	0.13	0.13	0.13	0.14	0.17
Fuel, lube, electricity	18.05	20.48	20.66	19.24	16.04	15.37	12.02	12.29	11.86	13.85
Machinery and building repairs	20.55	22.20	23.37	24.25	23.60	24.12	23.12	23.28	24.09	24.58
Hired labor	3.19	3.58	3.26	3.56	3.70	3.82	3.69	3.86	4.01	5.76
Total, variable cash expenses	143.11	157.81	155.12	158.87	166.23	149.72	134.80	132.87	174.29	166.79
General farm overhead	23.58	21.87	19.58	20.82	25.43	23.79	29.67	39.49	26.88	28.29
Taxes and insurance	35.41	35.50	38.75	50.24	44.47	41.08	46.00	50.72	47.53	54.78
Interest	51.04	47.44	45.69	48.60	49.02	46.98	40.46	42.78	53.59	51.55
Total, fixed cash expenses	110.03	104.81	104.03	119.66	118.92	111.84	116.13	132.99	128.00	134.62
Total, cash expenses	253.14	262.62	259.15	278.53	285.15	261.56	250.93	265.86	302.29	301.41
Gross value of production less cash expenses	76.66	13.00	-2.18	-11.33	-12.44	8.21	18.79	63.23	62.61	77.65

Table 59D--Cow-calf production economic costs and returns, North Central, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	96.67	79.36	79.81	81.05	82.15	79.25	84.03	101.84	114.24	116.73
Heifer calves	50.67	40.53	40.42	41.30	40.99	40.84	44.03	55.03	62.76	63.66
Yearling steers	79.07	69.02	58.19	62.55	62.75	65.88	59.93	71.98	79.93	86.48
Yearling heifers	59.73	51.91	43.41	46.66	47.05	49.34	45.03	56.01	62.01	64.43
Other cattle	43.66	34.80	35.14	35.64	39.77	34.46	36.70	44.23	45.96	47.76
Total, gross value of production	329.80	275.62	256.97	267.20	272.71	269.77	269.72	329.09	364.90	379.06
Economic (full ownership) costs:										
Variable cash expenses	143.11	157.81	155.12	158.87	166.23	149.72	134.80	132.87	174.29	166.79
General farm overhead	23.58	21.87	19.58	20.82	25.43	23.79	29.67	39.49	26.88	28.29
Taxes and insurance	35.41	35.50	38.75	50.24	44.47	41.08	46.00	50.72	47.53	54.78
Capital replacement	61.91	67.18	70.00	72.88	71.75	73.57	72.48	73.10	74.72	74.88
Operating capital	8.14	10.87	8.60	6.95	8.15	5.73	3.64	4.02	6.03	6.70
Other nonland capital	39.21	37.05	36.21	34.05	27.10	25.66	26.46	30.70	34.34	36.68
Land	108.99	109.73	97.16	82.66	63.00	45.05	63.23	60.92	73.30	90.92
Unpaid labor	87.60	99.13	92.62	99.09	98.73	102.51	100.30	104.13	110.62	112.46
Total, economic costs	507.94	539.14	518.04	525.56	504.86	467.11	476.58	495.95	547.71	571.50
Residual returns to management and risk	-178.14	-263.52	-261.07	-258.36	-232.15	-197.34	-206.86	-166.86	-182.81	-192.44

Table 60A--Cow-calf production cash costs and returns,
South, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	94.29	106.21
Heifer calves	91.72	96.88
Yearling steers	79.31	78.95
Yearling heifers	34.63	34.32
Other cattle	77.15	80.27
Total, gross value of production	377.10	396.63
Cash expenses:		
Feeder cattle	21.84	21.95
Feed--		
Grain	2.52	3.76
Protein supplements	19.52	18.31
By-products	14.68	14.48
Harvested forages	55.48	48.91
Pasture	36.71	32.77
Total feed costs	128.91	118.23
Other--		
Veterinary and medicine	9.83	10.72
Livestock hauling	2.03	2.36
Marketing	8.87	8.95
Custom feed mixing	0.23	0.34
Fuel, lube, electricity	22.69	24.01
Machinery and building repairs	35.09	32.99
Hired labor	25.07	26.63
Other variable cash expenses	7.35	7.56
Total, variable cash expenses	261.91	253.74
General farm overhead	32.12	24.16
Taxes and insurance	42.35	35.90
Interest	22.45	17.67
Total, fixed cash expenses	96.92	77.73
Total, cash expenses	358.83	331.47
Gross value of production less cash expenses	18.27	65.16

Table 60B--Cow-calf production economic costs and returns,
South, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	94.29	106.21
Heifer calves	91.72	96.88
Yearling steers	79.31	78.95
Yearling heifers	34.63	34.32
Other cattle	77.15	80.27
Total, gross value of production	377.10	396.63
Economic (full ownership) costs:		
Variable cash expenses	261.91	253.74
General farm overhead	32.12	24.16
Taxes and insurance	42.35	35.90
Capital replacement	88.22	71.46
Operating capital	14.67	10.35
Other nonland capital	29.98	27.11
Land	32.85	38.21
Unpaid labor	84.53	92.94
Total, economic costs	586.63	553.87
Residual returns to management and risk	-209.53	-157.24

Note: 1990 and 1991 estimates were based on a revised methodology and are not directly comparable with results for previous years.

Table 60C--Cow-calf production cash costs and returns, South, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	103.21	84.81	82.30	82.89	85.79	88.49	93.80	113.58	127.55	133.17
Heifer calves	57.11	46.77	45.27	45.29	46.13	48.76	51.62	64.43	73.59	74.94
Yearling steers	35.75	31.88	30.99	32.39	31.20	32.11	31.10	37.33	41.52	42.73
Yearling heifers	23.25	20.80	19.31	21.17	19.40	20.81	20.70	25.67	28.53	29.50
Other cattle	42.27	35.68	34.65	33.52	35.01	32.81	32.14	38.73	40.21	41.35
Total, gross value of production	261.59	219.94	212.52	215.26	217.53	222.98	229.36	279.74	311.40	321.69
Cash expenses:										
Feed--										
Grain	11.77	11.84	9.72	11.96	12.63	10.82	9.85	7.80	11.42	12.25
Silage	2.89	3.41	2.91	4.20	3.43	3.40	4.07	3.77	4.50	3.34
Protein supplements	13.98	14.96	13.90	14.21	14.74	13.05	8.86	8.96	10.31	10.85
Salt and minerals	2.82	3.17	3.36	3.45	3.54	3.62	1.91	1.93	1.94	2.02
Hay	39.33	49.72	52.47	49.71	55.64	46.83	41.16	39.00	47.90	39.05
Pasture	50.68	57.10	57.62	54.10	56.32	49.81	49.73	47.44	53.97	56.23
Total feed costs	121.47	140.20	139.98	137.63	146.30	127.53	115.58	108.90	130.04	123.74
Other--										
Veterinary and medicine	4.98	5.39	5.65	5.83	5.88	5.97	6.17	6.31	6.48	6.96
Livestock hauling	0.74	0.85	0.91	0.95	1.01	1.01	1.00	1.02	1.09	1.09
Marketing	4.41	4.15	4.16	4.19	4.23	4.29	3.79	3.87	4.14	4.37
Custom feed mixing	0.86	0.92	0.98	1.04	1.07	1.07	1.24	1.26	1.32	1.42
Fuel, lube, electricity	21.79	24.70	23.94	20.73	17.72	16.83	12.39	13.60	13.69	15.95
Machinery and building repairs	21.84	23.98	25.64	26.58	25.96	26.79	25.88	25.98	27.03	28.01
Hired labor	13.34	15.23	14.52	14.92	14.91	15.31	15.62	16.41	17.46	18.14
Total, variable cash expenses	189.43	215.42	215.78	211.87	217.05	198.80	181.67	177.33	201.18	199.68
General farm overhead	18.70	17.45	16.20	16.77	20.28	19.66	25.23	33.57	21.32	22.44
Taxes and insurance	16.95	16.81	18.57	20.14	18.73	19.45	21.76	26.43	27.90	29.75
Interest	40.49	37.85	37.79	39.15	39.10	38.83	34.40	36.37	42.51	40.89
Total, fixed cash expenses	76.14	72.12	72.55	76.07	78.12	77.94	81.39	96.37	91.73	93.08
Total, cash expenses	265.57	287.54	288.33	287.94	295.17	276.74	263.06	273.70	292.91	292.76
Gross value of production less cash expenses	-3.98	-67.60	-75.81	-72.68	-77.64	-53.76	-33.70	6.04	18.49	28.93

Table 60D--Cow-calf production cash costs and returns, South, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	103.21	84.81	82.30	82.89	85.79	88.49	93.80	113.58	127.55	133.17
Heifer calves	57.11	46.77	45.27	45.29	46.13	48.76	51.62	64.43	73.59	74.94
Yearling steers	35.75	31.88	30.99	32.39	31.20	32.11	31.10	37.33	41.52	42.73
Yearling heifers	23.25	20.80	19.31	21.17	19.40	20.81	20.70	25.67	28.53	29.50
Other cattle	42.27	35.68	34.65	33.52	35.01	32.81	32.14	38.73	40.21	41.35
Total, gross value of production	261.59	219.94	212.52	215.26	217.53	222.98	229.36	279.74	311.40	321.69
Economic (full ownership) costs:										
Variable cash expenses	189.43	215.42	215.78	211.87	217.05	198.80	181.67	177.33	201.18	199.68
General farm overhead	18.70	17.45	16.20	16.77	20.28	19.66	25.23	33.57	21.32	22.44
Taxes and insurance	16.95	16.81	18.57	20.14	18.73	19.45	21.76	26.43	27.90	29.75
Capital replacement	64.24	71.14	74.74	77.38	77.71	79.46	80.48	80.81	83.03	85.36
Operating capital	10.77	14.84	11.96	9.27	10.64	7.61	4.91	5.36	6.96	8.03
Other nonland capital	39.59	37.41	36.56	34.39	27.36	25.91	27.11	31.28	35.06	38.03
Land	115.58	116.63	109.16	103.66	81.29	72.51	72.81	92.47	105.43	118.32
Unpaid labor	60.00	68.76	66.35	69.64	72.13	73.43	84.30	86.48	95.46	100.04
Total, economic costs	515.26	558.46	549.31	543.12	525.19	496.83	498.27	533.73	576.34	601.65
Residual returns to management and risk	-253.67	-338.52	-336.79	-327.86	-307.66	-273.85	-268.91	-253.99	-264.94	-279.96

Table 61A--Cow-calf production cash costs and returns,
Great Plains, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	56.76	64.20
Heifer calves	44.20	46.63
Yearling steers	143.23	142.92
Yearling heifers	90.78	92.62
Other cattle	139.74	143.39
Total, gross value of production	474.71	489.76
Cash expenses:		
Feeder cattle	22.92	22.07
Feed--		
Grain	3.66	5.06
Protein supplements	30.32	29.90
By-products	7.21	6.92
Harvested forages	88.75	80.00
Pasture	50.43	44.80
Total feed costs	180.37	166.68
Other--		
Veterinary and medicine	11.76	11.51
Livestock hauling	1.52	1.77
Marketing	7.18	7.24
Custom feed mixing	0.76	1.13
Fuel, lube, electricity	23.72	25.41
Machinery and building repairs	28.72	27.99
Hired labor	24.89	27.00
Other variable cash expenses	6.62	6.62
Total, variable cash expenses	308.46	297.42
General farm overhead	34.21	25.60
Taxes and insurance	43.73	38.07
Interest	32.69	25.57
Total, fixed cash expenses	110.63	89.24
Total cash expenses	419.09	386.66
Gross value of production less cash expenses	55.62	103.10

Table 61B--Cow-calf production economic costs and returns,
Great Plains, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	56.76	64.20
Heifer calves	44.20	46.63
Yearling steers	143.23	142.92
Yearling heifers	90.78	92.62
Other cattle	139.74	143.39
Total, gross value of production	474.71	489.76
Economic (full ownership) costs:		
Variable cash expenses	308.46	297.42
General farm overhead	34.21	25.60
Taxes and insurance	43.73	38.07
Capital replacement	99.07	80.25
Operating capital	17.28	12.13
Other nonland capital	31.75	28.71
Land	61.79	61.27
Unpaid labor	79.40	81.68
Total, economic costs	675.69	625.13
Residual returns to management and risk	-200.98	-135.37

Note: 1990 and 1991 estimates were based on a revised methodology and are not directly comparable with results for previous years.

Table 61C--Cow-calf production cash costs and returns, Great Plains, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	82.72	70.94	69.90	71.51	72.30	75.73	72.70	88.13	98.68	103.30
Heifer calves	54.88	46.75	47.30	46.87	47.39	50.24	50.86	63.52	72.38	73.87
Yearling steers	96.07	80.59	78.29	70.70	79.17	71.04	78.88	94.39	105.03	109.49
Yearling heifers	56.07	50.69	50.44	42.90	47.97	45.35	50.70	62.95	69.71	72.81
Other cattle	26.13	22.09	22.50	20.58	22.32	21.39	21.53	25.77	26.81	27.89
Total, gross value of production	315.87	271.06	268.43	252.56	269.15	263.75	274.67	334.76	372.61	387.36
Cash expenses:										
Feed--										
Grain	7.17	7.56	6.95	9.27	9.93	8.20	6.56	6.18	9.07	8.77
Silage	5.97	7.08	5.97	8.05	8.37	8.92	7.66	6.89	8.15	6.25
Protein supplements	24.80	26.77	24.83	27.10	27.79	23.21	23.78	23.98	27.89	29.79
Salt and minerals	1.44	1.72	1.44	1.68	1.90	1.93	1.94	1.96	1.96	2.07
Hay	23.06	32.55	33.29	32.34	33.73	42.63	26.06	24.09	33.27	27.34
Pasture	32.62	29.60	33.90	29.43	35.13	33.23	33.52	30.29	32.81	35.76
Public grazing	0.81	0.88	0.89	0.74	0.90	0.85	0.86	0.91	0.94	0.98
Crop residue	0.19	0.19	0.19	0.21	0.22	0.20	0.22	0.18	0.21	0.22
Total feed costs	96.06	106.35	107.46	108.82	117.97	119.17	100.60	94.48	114.30	111.18
Other--										
Veterinary and medicine	4.97	5.43	5.85	6.04	6.30	6.38	6.57	6.68	6.88	7.45
Livestock hauling	1.34	1.97	1.55	1.57	1.63	1.69	1.65	1.64	1.67	1.81
Marketing	4.27	4.62	4.54	4.68	4.75	4.91	5.03	5.12	5.48	5.80
Custom feed mixing	0.53	0.56	0.64	0.53	0.53	0.54	0.56	0.57	0.60	0.64
Fuel, lube, electricity	20.06	22.61	22.21	20.67	17.69	17.08	11.97	13.31	13.08	15.46
Machinery and building repairs	14.60	16.28	18.67	19.54	19.23	20.38	19.72	19.78	20.86	21.86
Hired labor	10.37	12.59	11.52	11.85	11.93	11.43	12.61	12.82	13.08	14.17
Total, variable cash expenses	152.20	170.41	172.44	173.70	180.03	181.58	158.71	154.40	175.95	178.37
General farm overhead	22.58	21.51	20.46	19.68	25.10	23.26	30.21	40.17	25.74	27.10
Taxes and insurance	17.43	16.81	17.35	18.28	12.98	12.80	19.33	23.45	25.52	26.87
Interest	48.89	46.65	47.73	45.94	48.38	45.93	41.20	43.52	51.33	49.38
Total, fixed cash expenses	88.90	84.97	85.54	83.90	86.46	81.99	90.74	107.14	102.59	103.35
Total cash expenses	241.10	255.38	257.98	257.60	266.49	263.57	249.45	261.54	278.54	281.72
Gross value of production less cash expenses	74.77	15.68	10.45	-5.04	2.66	0.18	25.22	73.22	94.07	105.64

Table 61D--Cow-calf production economic costs and returns, Great Plains, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	82.72	70.94	69.90	71.51	72.30	75.73	72.70	88.13	98.68	103.30
Heifer calves	54.88	46.75	47.30	46.87	47.39	50.24	50.86	63.52	72.38	73.87
Yearling steers	96.07	80.59	78.29	70.70	79.17	71.04	78.88	94.39	105.03	109.49
Yearling heifers	56.07	50.69	50.44	42.90	47.97	45.35	50.70	62.95	69.71	72.81
Other cattle	26.13	22.09	22.50	20.58	22.32	21.39	21.53	25.77	26.81	27.89
Total, gross value of production	315.87	271.06	268.43	252.56	269.15	263.75	274.67	334.76	372.61	387.36
Economic (full ownership) costs:										
Variable cash expenses	152.20	170.41	172.44	173.70	180.03	181.58	158.71	154.40	175.95	178.37
General farm overhead	22.58	21.51	20.46	19.68	25.10	23.26	30.21	40.17	25.74	27.10
Taxes and insurance	17.43	16.81	17.35	18.28	12.98	12.80	19.33	23.45	25.52	26.87
Capital replacement	48.47	53.67	56.90	58.25	58.11	56.88	56.12	58.02	59.55	61.57
Operating capital	8.66	11.74	9.56	7.60	8.82	6.95	4.28	4.67	6.09	7.17
Other nonland capital	30.94	29.24	28.58	26.87	21.39	20.25	21.05	24.51	27.31	29.86
Land	94.69	95.17	97.02	89.56	71.94	60.00	54.68	63.74	71.11	75.92
Unpaid labor	57.93	62.82	65.08	67.11	68.41	69.53	72.75	72.51	74.75	79.92
Total, economic costs	432.90	461.36	467.38	461.05	446.78	431.25	417.13	441.47	466.02	486.78
Residual returns to management and risk	-117.03	-190.30	-198.95	-208.49	-177.63	-167.50	-142.46	-106.71	-93.41	-99.42

Table 62A--Cow-calf production cash costs and returns,
West, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	46.46	51.55
Heifer calves	38.73	40.18
Yearling steers	146.39	147.51
Yearling heifers	68.02	68.91
Other cattle	130.04	136.11
Total, gross value of production	429.64	444.26
Cash expenses:		
Feeder cattle	23.25	23.87
Feed--		
Grain	4.19	5.58
Protein supplements	19.04	19.06
By-products	3.40	3.31
Harvested forages	90.34	84.72
Pasture	52.50	47.20
Total feed costs	169.47	159.87
Other--		
Veterinary and medicine	12.15	10.33
Livestock hauling	3.06	3.56
Marketing	6.87	6.93
Custom feed mixing	0.33	0.49
Fuel, lube, electricity	15.69	16.75
Machinery and building repairs	26.29	28.17
Hired labor	30.78	32.58
Other variable cash expenses	4.88	4.94
Total, variable cash expenses	292.77	287.49
General farm overhead	39.25	29.45
Taxes and insurance	51.19	43.25
Interest	62.46	49.27
Total, fixed cash expenses	152.90	121.97
Total, cash expenses	445.67	409.46
Gross value of production less cash expenses	-16.03	34.80

Table 62B--Cow-calf production economic costs and returns,
West, 1990-91

Item	1990	1991
Dollars per bred cow		
Gross value of production:		
Steer calves	46.46	51.55
Heifer calves	38.73	40.18
Yearling steers	146.39	147.51
Yearling heifers	68.02	68.91
Other cattle	130.04	136.11
Total, gross value of production	429.64	444.26
Economic (full ownership) costs:		
Variable cash expenses	292.77	287.49
General farm overhead	39.25	29.45
Taxes and insurance	51.19	43.25
Capital replacement	98.93	80.13
Operating capital	16.40	11.73
Other nonland capital	30.96	28.00
Land	53.54	52.95
Unpaid labor	74.53	77.10
Total, economic costs	657.57	610.10
Residual returns to management and risk	-227.93	-165.84

Note: 1990 and 1991 estimates were based on a revised methodology and are not directly comparable with results for previous years.

Table 62C--Cow-calf production cash costs and returns, West, 1980-89

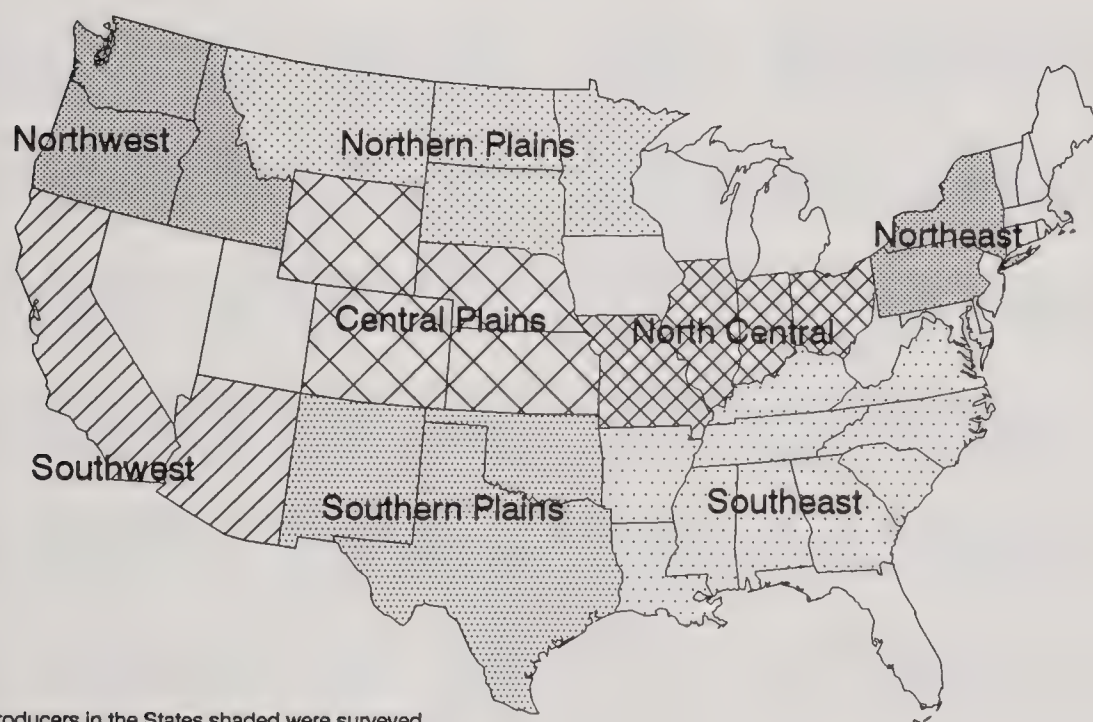
Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	81.07	66.55	68.11	65.95	68.88	67.93	69.96	84.84	95.24	99.49
Heifer calves	48.37	39.22	41.03	38.96	39.88	40.66	42.53	53.20	60.73	61.80
Yearling steers	98.01	85.26	84.41	75.71	83.44	75.36	81.12	97.34	108.06	111.32
Yearling heifers	59.08	52.72	52.61	45.54	50.46	47.18	51.49	63.90	70.71	73.15
Other cattle	38.46	32.79	33.85	31.51	33.41	31.74	32.17	38.77	40.26	41.38
Total, gross value of production	324.99	276.54	280.01	257.67	276.07	262.87	277.27	338.05	375.00	387.14
Cash expenses:										
Feed--										
Grain	11.27	7.82	8.08	10.57	10.92	9.03	7.16	6.13	8.62	9.53
Silage	1.70	1.70	1.70	1.97	2.01	2.14	1.79	1.67	1.97	1.46
Protein supplements	12.66	11.94	12.26	11.18	12.12	10.74	11.22	11.25	13.11	13.85
Salt and minerals	1.56	1.73	1.85	1.89	1.86	1.94	2.00	2.02	2.11	2.11
Hay	30.49	36.78	38.39	33.74	36.68	37.03	33.61	31.39	41.55	37.00
Pasture	40.48	45.05	44.89	44.40	43.42	42.60	38.07	34.67	36.91	38.89
Public grazing	1.85	2.02	1.91	1.68	1.63	1.57	1.47	1.52	1.60	1.71
Total feed costs	100.01	107.04	109.08	105.43	108.64	105.05	95.32	88.65	105.78	104.55
Other--										
Veterinary and medicine	5.27	5.82	6.44	6.64	6.95	7.01	7.20	7.34	7.55	8.13
Livestock hauling	2.15	2.41	2.68	2.72	2.78	2.88	2.80	2.81	2.87	3.06
Marketing	2.92	3.22	3.59	3.70	3.86	4.01	4.09	4.18	4.45	4.69
Fuel, lube, electricity	15.84	17.91	17.34	16.53	13.90	13.69	11.29	11.46	11.89	13.59
Machinery and building repairs	15.12	16.79	18.72	19.82	19.31	20.14	20.49	20.61	21.60	22.40
Hired labor	19.48	20.82	21.63	22.17	22.45	22.86	23.93	23.23	24.45	25.51
Total, variable cash expenses	160.79	174.01	179.48	177.01	177.89	175.64	165.12	158.28	178.59	181.93
General farm overhead	23.23	21.94	21.34	20.08	25.74	23.18	30.50	40.57	26.49	27.88
Taxes and insurance	17.05	14.62	15.24	15.40	13.74	13.31	17.84	24.84	26.71	28.14
Interest	50.30	47.60	49.79	46.87	49.63	45.78	41.59	43.95	52.81	50.80
Total, fixed cash expenses	90.58	84.16	86.37	82.35	89.11	82.26	89.93	109.36	106.01	106.82
Total, cash expenses	251.37	258.17	265.85	259.36	267.00	257.90	255.05	267.64	284.60	288.75
Gross value of production less cash expenses	73.62	18.37	14.16	-1.69	9.07	4.97	22.22	70.41	90.40	98.39

Table 62D--Cow-calf production economic costs and returns, West, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Dollars per bred cow										
Gross value of production:										
Steer calves	81.07	66.55	68.11	65.95	68.88	67.93	69.96	84.84	95.24	99.49
Heifer calves	48.37	39.22	41.03	38.96	39.88	40.66	42.53	53.20	60.73	61.80
Yearling steers	98.01	85.26	84.41	75.71	83.44	75.36	81.12	97.34	108.06	111.32
Yearling heifers	59.08	52.72	52.61	45.54	50.46	47.18	51.49	63.90	70.71	73.15
Other cattle	38.46	32.79	33.85	31.51	33.41	31.74	32.17	38.77	40.26	41.38
Total, gross value of production	324.99	276.54	280.01	257.67	276.07	262.87	277.27	338.05	375.00	387.14
Economic (full ownership) costs:										
Variable cash expenses	160.79	174.01	179.48	177.01	177.89	175.64	165.12	158.28	178.59	181.93
General farm overhead	23.23	21.94	21.34	20.08	25.74	23.18	30.50	40.57	26.49	27.88
Taxes and insurance	17.05	14.62	15.24	15.40	13.74	13.31	17.84	24.84	26.71	28.14
Capital replacement	44.92	48.18	53.84	53.36	55.36	53.86	54.46	56.31	58.69	59.67
Operating capital	9.14	11.99	9.95	7.74	8.72	6.73	4.46	4.79	6.18	7.31
Other nonland capital	30.10	28.45	27.80	26.14	20.80	19.70	20.51	23.88	26.75	28.89
Land	53.70	54.87	56.19	51.12	41.32	35.47	40.06	48.50	54.21	59.88
Unpaid labor	64.48	69.32	72.19	74.32	79.78	80.75	84.16	79.11	83.41	88.99
Total, economic costs	403.42	423.38	436.03	425.17	423.35	408.64	417.13	436.28	461.03	482.69
Residual returns to management and risk	-78.43	-146.84	-156.02	-167.50	-147.28	-145.77	-139.86	-98.23	-86.03	-95.55

Figure 27

Wheat Production Regions, 1980-88



Producers in the States shaded were surveyed about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Appendix table 1A--U.S. wheat production cash costs and returns, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	112.41	114.35	110.32	128.52	113.97	93.52	66.06	76.21	95.89
Wheat straw 1/	4.07	4.61	4.37	4.45	4.48	2.48	2.06	2.18	3.78
Total, gross value of production	116.48	118.96	114.69	132.97	118.45	96.00	68.12	78.39	99.67
Cash expenses:									
Seed	6.51	7.19	6.65	6.37	6.48	7.59	7.29	6.62	6.69
Fertilizer, lime, and gypsum	13.86	17.61	17.56	18.36	18.37	15.91	14.53	13.07	15.34
Chemicals	2.23	2.41	3.16	3.27	3.19	4.26	4.06	3.82	3.82
Custom operations 2/	2.94	4.54	5.86	6.02	6.04	4.17	4.12	4.12	3.89
Fuel, lube, and electricity	10.62	12.33	11.77	11.06	9.54	9.93	6.74	7.56	7.37
Repairs	7.23	7.80	7.18	7.77	7.49	6.56	6.17	6.32	6.41
Hired labor	2.88	3.00	3.02	3.21	3.15	2.43	2.54	2.53	2.59
Other variable cash expenses 3/	0.49	0.41	0.82	0.71	0.75	0.25	0.22	0.20	0.20
Total, variable cash expenses	46.76	55.29	56.03	56.77	55.01	51.10	45.67	45.67	44.24
General farm overhead	7.08	7.39	7.11	8.05	8.62	5.10	4.69	6.01	6.89
Taxes and insurance	7.33	7.39	6.90	7.69	7.86	7.44	7.92	8.11	8.19
Interest	14.58	19.81	18.45	21.86	22.98	12.69	9.08	10.09	9.57
Total, fixed cash expenses	28.99	34.59	32.46	37.60	39.46	25.23	21.69	24.21	24.65
Total, cash expenses	75.75	89.88	88.49	94.37	94.47	76.33	67.36	69.88	68.89
Gross value of production less cash expenses	40.73	29.08	26.20	38.60	23.98	19.67	0.76	8.51	30.78
Harvest-period price (dollars/bu.)	3.76	3.63	3.38	3.48	3.37	2.98	2.29	2.39	3.50
Yield (bu./planted acre)	29.87	31.47	32.64	36.89	33.79	31.41	28.79	31.87	27.42

Appendix table 1B--U.S. wheat production economic costs and returns, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	112.41	114.35	110.32	128.52	113.97	93.52	66.06	76.21	95.89
Wheat straw	4.07	4.61	4.37	4.45	4.48	2.48	2.06	2.18	3.78
Total, gross value of production	116.48	118.96	114.69	132.97	118.45	96.00	68.12	78.39	99.67
Economic (full ownership) costs:									
Variable cash expenses	46.76	55.29	56.03	56.77	55.01	51.10	45.67	45.67	44.24
General farm overhead	7.08	7.39	7.11	8.05	8.62	5.10	4.69	6.01	6.89
Taxes and insurance	7.33	7.39	6.90	7.69	7.86	7.44	7.92	8.11	8.19
Capital replacement	18.15	19.30	19.41	21.02	20.48	19.63	19.90	20.33	20.67
Operating capital	2.83	3.91	3.09	2.51	2.72	2.11	1.38	1.46	1.78
Other nonland capital	3.64	3.46	3.24	3.19	3.84	3.67	3.66	3.69	4.33
Land	30.06	29.44	29.75	34.41	29.78	30.81	23.30	24.87	31.38
Unpaid labor	6.40	6.67	6.72	7.14	7.01	5.40	5.66	5.63	5.77
Total, economic (full ownership) costs	122.25	132.85	132.25	140.78	135.31	125.26	112.18	115.77	123.25
Residual returns to management and risk	-5.77	-13.89	-17.56	-7.81	-16.86	-29.26	-44.06	-37.38	-23.58
Harvest-period price (dollars/bu.)	3.76	3.63	3.38	3.48	3.37	2.98	2.29	2.39	3.50
Yield (bu./planted acre)	29.87	31.47	32.64	36.89	33.79	31.41	28.79	31.87	27.42

1/ Includes value of wheat grazing in Southern Plains before 1985. 2/ Includes cost of technical services.

3/ Includes cost of purchased irrigation water.

Appendix table 2A--Wheat production cash costs and returns, Northeast, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	151.68	122.08	116.91	133.15	129.91	146.17	117.68	104.50	184.32
Wheat straw	42.51	66.56	61.26	59.31	72.14	83.88	82.74	95.48	101.13
Total, gross value of production	194.19	188.64	178.17	192.46	202.05	230.05	200.42	199.98	285.45
Cash expenses:									
Seed	12.16	13.98	12.52	12.13	15.03	18.78	15.20	18.03	14.72
Fertilizer, lime, and gypsum	40.10	44.25	41.40	31.37	31.53	44.60	40.23	37.13	42.80
Chemicals	0.11	0.12	0.86	1.00	0.33	5.74	5.70	6.27	6.14
Custom operations 1/	5.28	5.62	5.44	5.57	5.74	4.38	4.38	4.57	5.19
Fuel, lube, and electricity	12.43	14.47	15.47	14.23	12.93	11.46	7.75	8.04	8.61
Repairs	7.81	8.67	9.63	10.21	9.94	7.38	7.38	7.38	8.03
Hired labor	4.92	5.31	6.19	5.95	7.08	3.71	4.03	3.93	4.66
Other variable cash expenses 2/	1.88	1.94	2.05	2.06	2.10	0.00	0.00	0.00	0.00
Total, variable cash expenses	84.69	94.36	93.56	82.52	84.68	96.42	84.67	85.35	90.15
General farm overhead	19.37	10.59	6.64	12.40	12.19	17.62	29.92	25.92	33.97
Taxes and insurance	13.87	15.31	18.37	19.17	21.05	20.81	22.07	22.70	24.12
Interest	27.94	16.44	18.68	15.57	18.04	29.51	25.55	29.92	24.44
Total, fixed cash expenses	61.18	42.34	43.69	47.14	51.28	67.94	77.54	55.84	58.41
Total, cash expenses	145.87	136.70	137.25	129.66	135.96	164.36	162.21	141.19	148.56
Gross value of production less cash expenses	48.32	51.94	40.92	62.80	66.09	65.69	38.21	58.79	136.89
Harvest-period price (dollars/bu.)	3.97	3.28	3.26	3.38	3.56	2.96	2.69	2.50	3.56
Yield (bu./planted acre)	38.18	37.24	35.91	39.37	36.46	49.31	43.74	41.84	51.71

Appendix table 2B--Wheat production economic costs and returns, Northeast, 1980-89

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	151.68	122.08	116.91	133.15	129.91	146.17	117.68	104.50	184.32
Wheat straw	42.51	66.56	61.26	59.31	72.14	83.88	82.74	95.48	101.13
Total, gross value of production	194.19	188.64	178.17	192.46	202.05	230.05	200.42	199.98	285.45
Economic (full ownership) costs:									
Variable cash expenses	84.69	94.36	93.56	82.52	84.68	96.42	84.67	85.35	90.15
General farm overhead	19.37	10.59	6.64	12.40	12.19	17.62	29.92	25.92	33.97
Taxes and insurance	13.87	15.31	18.37	19.17	21.05	20.81	22.07	22.70	24.12
Capital replacement	19.16	20.71	29.90	32.00	34.02	30.48	30.77	30.56	32.84
Operating capital	6.02	8.12	6.42	4.50	5.07	5.43	3.40	3.80	4.59
Other nonland capital	4.04	3.98	5.86	5.63	7.55	5.77	5.77	5.65	7.10
Land	17.08	17.25	19.82	20.70	22.88	33.57	26.94	30.53	36.69
Unpaid labor	10.94	11.79	13.75	13.21	15.73	8.26	8.86	8.76	10.36
Total, economic costs	175.17	182.11	194.33	190.13	203.17	218.32	212.40	213.27	239.82
Residual returns to management and risk	19.02	6.53	-16.16	2.33	-1.12	11.73	-11.98	-13.29	45.63
Harvest-period price (dollars/bu.)	3.97	3.28	3.26	3.38	3.56	2.96	2.69	2.50	3.56
Yield (bu./planted acre)	38.18	37.24	35.91	39.37	36.46	49.31	43.74	41.84	51.71

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Appendix table 3A--Wheat production cash costs and returns, Southeast, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	124.90	135.87	105.33	105.57	117.61	79.45	67.63	79.56	143.09
Wheat straw	18.36	3.18	1.52	1.60	1.48	1.83	1.37	1.48	1.54
Total, gross value of production	143.26	139.05	106.85	107.17	119.09	81.28	69.00	81.04	144.63
Cash expenses:									
Seed	11.18	11.78	10.16	9.68	11.20	11.75	10.61	10.00	10.97
Fertilizer, lime, and gypsum	33.48	39.23	35.7	34.65	36.24	33.62	29.78	27.77	33.66
Chemicals	0.94	2.57	2.75	2.87	2.96	1.95	1.83	1.70	1.75
Custom operations 1/	3.54	7.34	7.34	7.35	7.38	4.24	3.33	3.11	4.29
Fuel, lube, and electricity	11.00	11.04	10.14	8.99	7.43	7.70	4.55	5.83	5.83
Repairs	6.42	6.02	6.02	6.27	6.45	6.30	5.69	5.96	6.65
Hired labor	3.62	3.12	2.97	3.04	3.04	2.59	2.59	2.71	2.89
Other variable cash expenses 2/	0.79	0.21	0.86	0.86	0.87	0.00	0.00	0.00	0.00
Total, variable cash expenses	70.97	81.31	75.94	73.71	75.57	68.16	58.38	57.08	66.04
General farm overhead	7.42	6.66	4.89	4.98	5.10	3.39	4.01	4.63	8.08
Taxes and insurance	4.09	3.71	3.82	4.09	4.38	7.32	7.30	7.56	7.97
Interest	17.33	19.46	17.24	13.74	14.5	8.83	7.55	7.33	9.94
Total, fixed cash expenses	28.84	29.83	25.95	22.81	23.98	19.54	18.86	19.52	25.99
Total, cash expenses	99.81	111.14	101.89	96.52	99.55	87.69	77.24	76.60	92.03
Gross value of production less cash expenses	43.45	27.91	4.96	10.65	19.54	-6.41	-8.24	4.44	52.60
Harvest-period price (dollars/bu.)	3.75	3.45	3.09	3.26	3.23	2.97	2.47	2.47	3.36
Yield (bu./planted acre)	33.33	39.40	34.09	32.38	36.46	26.79	27.33	32.19	42.61

Appendix table 3B--Wheat production economic costs and returns, Southeast, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	124.90	135.87	105.33	105.57	117.61	79.45	67.63	79.56	143.09
Wheat straw	18.36	3.18	1.52	1.60	1.48	1.83	1.37	1.48	1.54
Total, gross value of production	143.26	139.05	106.85	107.17	119.09	81.28	69.00	81.04	144.63
Economic (full ownership) costs:									
Variable cash expenses	70.97	81.31	75.94	73.71	75.57	68.16	58.38	57.08	66.04
General farm overhead	7.42	6.66	4.89	4.98	5.10	3.39	4.01	4.63	8.08
Taxes and insurance	4.09	3.71	3.82	4.09	4.38	7.32	7.30	7.56	7.97
Capital replacement	17.11	16.81	17.53	18.47	18.39	17.60	18.24	18.97	20.76
Operating capital	4.08	5.93	4.42	3.38	3.94	3.04	1.90	2.05	2.65
Other nonland capital	3.37	2.75	2.67	2.53	3.19	3.10	3.07	3.16	4.08
Land	23.74	24.94	21.66	21.18	22.81	21.13	20.54	20.13	27.53
Unpaid labor	8.03	6.94	7.10	6.74	6.74	5.77	5.77	6.02	6.42
Total, economic costs	138.81	149.05	137.52	135.08	140.12	129.51	119.21	119.60	143.53
Residual returns to management and risk	4.45	-10.00	-30.67	-27.91	-21.03	-48.23	-50.21	-38.56	1.10
Harvest-period price (dollars/bu.)	3.75	3.45	3.09	3.26	3.23	2.97	2.47	2.47	3.36
Yield (bu./planted acre)	33.33	39.40	34.09	32.38	36.46	26.79	27.33	32.19	42.61

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Appendix table 4A--Wheat production cash costs and returns, North Central, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	169.84	145.71	112.96	142.00	131.91	127.95	69.28	113.55	160.21
Wheat straw	16.20	17.58	12.97	13.36	13.24	16.65	13.52	16.75	28.59
Total, gross value of production	186.04	163.29	125.93	155.36	145.15	144.60	82.80	130.30	188.80
Cash expenses:									
Seed	10.72	10.69	9.31	9.09	10.91	12.27	11.86	10.40	10.59
Fertilizer, lime, and gypsum	34.96	37.45	32.14	39.44	42.97	26.97	25.4	24.09	28.87
Chemicals	0.34	0.37	0.43	0.47	0.41	1.36	1.47	1.46	1.39
Custom operations 1/	4.35	3.82	6.3	6.47	6.55	1.79	1.79	1.85	1.95
Fuel, lube, and electricity	10.18	11.30	10.67	10.11	8.07	8.49	4.85	6.54	6.38
Repairs	6.38	6.86	5.64	6.35	5.88	5.63	4.57	5.41	5.93
Hired labor	3.62	3.98	3.60	3.64	3.53	3.13	2.97	3.39	3.61
Total, variable cash expenses	70.55	74.47	68.08	75.57	78.31	59.63	52.91	53.14	58.72
General farm overhead	8.71	7.58	5.56	7.57	7.48	5.36	3.96	7.78	11.33
Taxes and insurance	11.82	10.97	11.88	13.14	12.58	11.70	12.07	12.74	12.49
Interest	18.71	20.82	16.45	25.15	25.13	17.09	9.83	14.31	18.65
Total, fixed cash expenses	39.24	39.37	33.89	45.86	45.19	34.15	25.86	34.83	42.47
Total, cash expenses	109.79	113.84	101.97	121.43	123.50	93.78	78.77	87.97	101.19
Gross value of production less cash expenses	76.25	49.45	23.96	33.93	21.65	50.82	4.03	42.33	87.61
Harvest-period price (dollars/bu.)	3.80	3.42	3.14	3.28	3.26	2.89	2.29	2.37	3.42
Yield (bu./planted acre)	44.73	42.55	35.97	43.30	40.44	44.34	30.29	47.96	46.86

Appendix table 4B--Wheat production economic costs and returns, North Central, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	169.84	145.71	112.96	142.00	131.91	127.95	69.28	113.55	160.21
Wheat straw	16.20	17.58	12.97	13.36	13.24	16.65	13.52	16.75	28.59
Total, gross value of production	186.04	163.29	125.93	155.36	145.15	144.60	82.80	130.30	188.80
Economic (full ownership) costs:									
Variable cash expenses	70.55	74.47	68.08	75.57	78.31	59.63	52.91	53.14	58.72
General farm overhead	8.71	7.58	5.56	7.57	7.48	5.36	3.96	7.78	11.33
Taxes and insurance	11.82	10.97	11.88	13.14	12.58	11.70	12.07	12.74	12.49
Capital replacement	17.69	18.53	20.27	22.44	22.12	22.63	19.37	21.96	24.14
Operating capital	4.29	5.52	4.01	3.60	4.21	3.12	2.12	2.29	2.86
Other nonland capital	3.61	3.45	3.65	3.69	4.43	4.24	3.61	4.10	5.22
Land	3.61	3.45	3.65	3.69	4.43	4.24	3.61	4.10	5.22
Unpaid labor	47.53	37.58	29.84	35.91	32.21	50.43	29.26	44.23	63.65
Total, economic costs	8.05	8.85	7.99	8.09	7.83	6.95	6.62	7.53	8.03
Total, economic costs	172.25	166.95	151.28	170.01	169.18	164.07	129.92	153.77	186.44
Residual returns to management and risk	13.79	-3.66	-25.35	-14.65	-24.03	-19.47	-47.12	-23.47	2.36
Harvest-period price (dollars/bu.)	3.80	3.42	3.14	3.28	3.26	2.89	2.29	2.37	3.42
Yield (bu./planted acre)	44.73	42.55	35.97	43.30	40.44	44.34	30.29	47.96	46.86

1/ Includes cost of technical services.

Appendix table 5A--Wheat production cash costs and returns, Northern Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	73.40	105.23	109.72	108.35	118.11	86.36	67.61	75.46	47.99
Wheat straw	0.00	0.00	0.89	0.91	0.90	1.95	1.41	1.55	2.77
Total, gross value of production	73.40	105.23	110.61	109.26	119.01	88.31	69.02	77.01	50.76
Cash expenses:									
Seed	6.70	7.86	7.33	7.10	7.50	6.86	6.62	5.82	6.19
Fertilizer, lime, and gypsum	8.84	9.70	10.55	12.38	11.15	11.97	10.30	9.58	10.87
Chemicals	3.36	3.65	5.39	5.81	5.61	4.40	4.39	4.29	4.35
Custom operations 1/	1.36	1.50	2.13	2.20	2.27	3.28	3.50	3.61	2.25
Fuel, lube, and electricity	8.82	10.76	9.26	8.86	7.55	6.63	4.13	5.10	4.57
Repairs	6.84	8.49	6.69	7.18	7.29	5.79	5.74	5.83	5.27
Hired labor	2.23	2.64	2.44	2.65	2.77	1.80	2.00	1.93	1.77
Other variable cash expenses 2/	0.01	0.01	0.44	0.44	0.44	0.00	0.00	0.00	0.00
Total, variable cash expenses	38.16	44.61	44.23	46.62	44.58	40.73	36.68	36.16	35.27
General farm overhead	4.64	7.39	6.99	7.36	11.53	4.27	4.22	6.24	3.83
Taxes and insurance	6.32	6.95	6.74	7.22	8.03	6.63	7.26	7.43	6.78
Interest	9.09	21.08	19.61	20.59	32.81	12.11	8.79	11.06	5.82
Total, fixed cash expenses	20.05	35.42	33.34	35.17	52.37	23.01	20.27	24.73	16.43
Total, cash expenses	58.21	80.03	77.57	81.79	96.95	63.74	56.95	60.89	51.70
Gross value of production less cash expenses	15.19	25.20	33.04	27.47	22.06	24.57	12.07	16.12	-0.94
Harvest-period price (dollars/bu.)	3.97	3.69	3.46	3.77	3.54	3.03	2.28	2.45	3.82
Yield (bu./planted acre)	18.51	28.51	31.68	28.76	33.36	28.49	29.69	30.81	12.56

Appendix table 5B--Wheat production economic costs and returns, Northern Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	73.40	105.23	109.72	108.35	118.11	86.36	67.61	75.46	47.99
Wheat straw	0	0	0.89	0.91	0.90	1.95	1.41	1.55	2.77
Total, gross value of production	73.40	105.23	110.61	109.26	119.01	88.31	69.02	77.01	50.76
Economic (full ownership) costs:									
Variable cash expenses	38.16	44.61	44.23	46.62	44.58	40.73	36.68	36.16	35.27
General farm overhead	4.64	7.39	6.99	7.36	11.53	4.27	4.22	6.24	3.83
Taxes and insurance	6.32	6.95	6.74	7.22	8.03	6.63	7.26	7.43	6.78
Capital replacement	17.09	20.95	20.29	21.59	22.42	19.77	21.42	21.79	20.06
Operating capital	1.51	2.03	1.50	1.27	1.37	0.90	0.56	0.61	0.74
Other nonland capital	3.47	3.90	3.51	3.35	4.35	3.70	3.96	3.95	4.08
Land	26.89	34.61	34.88	34.07	35.59	30.96	28.61	27.81	24.60
Unpaid labor	4.95	5.87	5.43	5.90	6.14	4.02	4.44	4.29	3.95
Total, economic costs	103.03	126.31	123.56	127.38	134.02	110.98	107.15	108.28	99.31
Residual returns to management and risk	-29.63	-21.08	-12.95	-18.12	-15.01	-22.67	-38.13	-31.27	-48.55
Harvest-period price (dollars/bu.)	3.97	3.69	3.46	3.77	3.54	3.03	2.28	2.45	3.82
Yield (bu./planted acre)	18.51	28.51	31.68	28.76	33.36	28.49	29.69	30.81	12.56

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Appendix table 6A--Wheat production cash costs and returns, Central Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	111.36	88.50	104.95	130.40	111.90	98.30	63.54	76.85	103.71
Wheat straw	1.10	1.24	2.12	2.11	2.19	0.58	0.55	0.59	0.52
Total, gross value of production	112.46	89.74	107.07	132.51	114.09	98.88	64.09	77.44	104.23
Cash expenses:									
Seed	4.11	4.28	4.54	4.30	4.30	6.67	6.55	5.71	5.59
Fertilizer, lime, and gypsum	8.29	9.38	10.79	10.77	10.50	11.11	13.29	11.43	12.27
Chemicals	0.87	0.96	1.09	1.15	1.15	0.97	1.07	1.07	1.06
Custom operations 1/	3.47	3.54	6.6	6.96	7.01	4.67	4.58	4.69	4.93
Fuel, lube, and electricity	9.97	11.38	10.72	9.99	8.45	7.51	4.83	5.98	5.87
Repairs	6.99	7.55	7.02	7.58	7.17	6.36	6.10	6.32	6.55
Hired labor	2.58	2.66	2.89	3.05	3.04	2.28	2.58	2.42	2.59
Other variable cash expenses 2/	0.01	0.00	0.25	0.25	0.25	0.00	0.00	0.00	0.00
Total, variable cash expenses	36.29	39.75	43.90	44.05	41.88	39.57	39.00	37.62	38.86
General farm overhead	7.18	5.84	6.19	8.79	9.04	5.31	3.69	6.10	7.52
Taxes and insurance	7.58	8.04	7.53	8.11	8.64	8.57	9.05	9.39	9.96
Interest	14.04	15.86	18.41	25.12	24.71	13.25	7.59	10.66	10.73
Total, fixed cash expenses	28.80	29.74	32.13	42.02	42.39	27.13	20.33	26.15	28.21
Total, cash expenses	65.09	69.49	76.03	86.07	84.27	66.70	59.33	63.77	67.07
Gross value of production less cash expenses	47.37	20.25	31.04	46.44	29.82	32.18	4.76	13.67	37.16
Harvest-period price (dollars/bu.)	3.50	3.67	3.37	3.37	3.29	2.81	2.15	2.26	3.31
Yield (bu./planted acre)	31.79	24.09	31.13	38.73	34.02	35.01	29.55	34.06	31.33

Appendix table 6B--Wheat production economic costs and returns, Central Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	111.36	88.50	104.95	130.40	111.90	98.30	63.54	76.85	103.71
Wheat straw	1.10	1.24	2.12	2.11	2.19	0.58	0.55	0.59	0.52
Total, gross value of production	112.46	89.74	107.07	132.51	114.09	98.88	64.09	77.44	104.23
Economic (full ownership) costs:									
Variable cash expenses	36.29	39.75	43.90	44.05	41.88	39.57	39.00	37.62	38.86
General farm overhead	7.18	5.84	6.19	8.79	9.04	5.31	3.69	6.10	7.52
Taxes and insurance	7.58	8.04	7.53	8.11	8.64	8.57	9.05	9.39	9.96
Capital replacement	17.62	18.81	18.95	20.33	19.74	18.46	18.66	19.19	20.08
Operating capital	2.59	3.49	2.85	2.22	2.36	1.96	1.37	1.44	1.71
Other nonland capital	3.57	3.46	3.22	3.15	3.72	3.54	3.56	3.63	4.39
Land	29.31	20.87	28.98	36.52	30.13	24.10	15.51	18.70	25.60
Unpaid labor	5.74	5.90	6.41	6.79	6.76	5.09	5.74	5.39	5.77
Total, economic costs	109.88	106.16	118.03	129.96	122.26	106.60	96.58	101.46	113.89
Residual returns to management and risk	2.58	-16.42	-10.96	2.55	-8.17	-7.72	-32.49	-24.02	-9.66
Harvest-period price (dollars/bu.)	3.50	3.67	3.37	3.37	3.29	2.81	2.15	2.26	3.31
Yield (bu./planted acre)	31.79	24.09	31.13	38.73	34.02	35.01	29.55	34.06	31.33
1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.									

Appendix table 7A--Wheat production cash costs and returns, Southern Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Dollars per planted acre								
Gross value of production (excluding direct Government payments):									
Wheat	87.23	86.35	83.93	102.60	80.04	65.97	39.45	38.17	65.37
Wheat straw 1/	5.42	9.62	9.51	9.51	9.35	0.10	0.09	0.12	0.11
Total, gross value of production	92.65	95.97	93.44	112.11	89.39	66.07	39.54	38.29	65.48
Cash expenses:									
Seed	5.39	5.54	5.30	5.02	4.08	5.40	5.73	5.61	4.66
Fertilizer, lime, and gypsum	12.45	15.58	15.00	12.20	15.52	13.44	11.87	10.25	11.95
Chemicals	1.75	1.74	1.86	1.94	1.98	5.77	5.88	5.43	5.44
Custom operations 2/	3.95	7.70	8.07	8.43	7.84	4.29	4.11	3.89	4.33
Fuel, lube, and electricity	12.88	14.60	14.75	14.30	12.62	14.53	10.71	10.99	11.26
Repairs	7.38	6.97	7.27	7.92	7.36	6.45	5.90	5.86	6.30
Hired labor	3.10	2.77	2.92	3.01	3.02	2.51	2.49	2.55	2.62
Other variable cash expenses 3/	0.07	0.01	0.01	0.02	0.01	0.47	0.48	0.45	0.44
Total, variable cash expenses	46.97	54.91	55.18	52.84	52.43	52.86	47.17	45.03	47.00
General farm overhead	5.95	5.63	4.91	4.80	5.00	3.38	3.58	2.55	4.12
Taxes and insurance	4.33	3.97	3.85	4.08	4.16	4.85	4.92	5.03	5.16
Interest	10.35	13.63	11.82	11.58	10.84	6.49	5.91	4.31	5.60
Total, fixed cash expenses	20.63	23.23	20.58	20.46	20.00	14.72	14.41	11.89	14.88
Total, cash expenses	67.60	78.14	75.76	73.30	72.43	67.57	61.58	56.92	61.88
Gross value of production less cash expenses	25.05	17.83	17.68	38.81	16.96	-1.50	-22.04	-18.63	3.60
Harvest-period price (dollars/bu.)	3.56	3.72	3.45	3.32	3.36	2.94	2.28	2.32	3.35
Yield (bu./planted acre)	24.51	23.18	24.36	30.92	23.80	22.41	17.30	16.46	19.49

Appendix table 7B--Wheat production economic costs and returns, Southern Plains, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Dollars per planted acre								
Gross value of production (excluding direct Government payments):									
Wheat	87.23	86.35	83.93	102.60	80.04	65.97	39.45	38.17	65.37
Wheat straw and grazing 1/	5.42	9.62	9.51	9.51	9.35	0.10	0.09	0.12	0.11
Total, gross value of production	92.65	95.97	93.44	112.11	89.39	66.07	39.54	38.29	65.48
Economic (full ownership) costs:									
Variable cash expenses	46.97	54.91	55.18	52.84	52.43	52.86	47.17	45.03	47.00
General farm overhead	5.95	5.63	4.91	4.80	5.00	3.38	3.58	2.55	4.12
Taxes and insurance	4.33	3.97	3.85	4.08	4.16	4.85	4.92	5.03	5.16
Capital replacement	16.44	15.61	16.33	17.87	16.14	17.58	17.30	17.03	18.14
Operating capital	3.28	3.92	3.14	2.34	2.61	2.50	1.63	1.75	2.05
Other nonland capital	3.18	2.48	2.49	2.49	2.88	3.27	3.05	2.95	3.72
Land	19.65	21.62	20.58	25.28	19.82	22.03	13.85	13.63	21.33
Unpaid labor	6.90	6.15	6.48	6.70	6.71	5.57	5.54	5.67	5.82
Total, economic costs	106.70	114.29	112.96	116.40	109.75	112.04	97.04	93.64	107.34
Residual returns to management and risk	-14.05	-18.32	-19.52	-4.29	-20.36	-45.97	-57.50	-55.35	-41.86
Harvest-period price (dollars/bu.)	3.56	3.72	3.45	3.32	3.36	2.94	2.28	2.32	3.35
Yield (bu./planted acre)	24.51	23.18	24.36	30.92	23.80	22.41	17.30	16.46	19.49

1/ Data on value of wheat grazing not available after 1985. 2/ Includes cost of technical services.

3/ Includes cost of purchased irrigation water.

Appendix table 8A--Wheat production cash costs and returns, Northwest, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments)									
Wheat	194.77	212.09	192.05	231.23	187.59	146.65	122.12	152.33	226.99
Wheat straw	0	0	2.43	2.32	1.97	0.94	0.89	0.82	1.08
Total, gross value of production	194.77	212.09	194.48	233.55	189.56	147.59	123.01	153.15	228.07
Cash expenses:									
Seed	7.37	6.72	6.58	6.61	7.08	9.36	8.83	8.29	8.35
Fertilizer, lime, and gypsum	18.72	23.24	25.81	27.4	25.39	22.61	20.15	19.2	19.66
Chemicals	6.48	7.20	10.13	10.54	11.46	10.38	10.41	10.18	10.29
Custom operations 1/	2.97	3.21	3.80	3.76	3.51	2.69	2.73	2.80	2.98
Fuel, lube, and electricity	12.24	13.53	14.26	13.91	12.16	14.43	11.94	13.10	13.01
Repairs	9.54	10.05	11.51	12.37	12.11	10.71	10.32	10.90	11.30
Hired labor	3.17	3.34	4.16	4.58	4.31	3.23	3.43	3.78	3.76
Other variable cash expenses 2/	1.95	1.82	2.07	2.08	2.12	1.91	1.85	1.90	1.91
Total, variable cash expenses	62.44	69.11	78.32	81.25	78.14	75.32	69.66	70.15	71.26
General farm overhead	12.74	14.59	19.44	14.80	14.67	11.02	10.77	13.31	17.38
Taxes and insurance	11.64	12.50	10.43	11.30	12.93	10.12	10.76	11.30	11.28
Interest	31.20	35.95	33.36	34.09	31.90	25.48	20.57	19.22	21.59
Total, fixed cash expenses	55.58	63.04	63.23	60.19	59.50	46.62	42.10	43.83	50.25
Total, cash expenses	118.02	132.15	141.55	141.44	137.64	121.94	111.76	113.98	121.51
Gross value of production less cash expenses	76.75	79.94	52.93	92.11	51.92	25.65	11.25	39.17	106.56
Harvest-period price (dollars/bu.)	3.68	3.84	3.75	3.75	3.40	3.14	2.41	2.50	3.74
Yield (bu./planted acre)	52.90	55.22	51.18	61.72	55.21	46.69	50.69	60.82	60.70

Appendix table 8B--Wheat production economic costs and returns, Northwest, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments)									
Wheat	194.77	212.09	192.05	231.23	187.59	146.65	122.12	152.33	226.99
Wheat straw	0	0	2.43	2.32	1.97	0.94	0.89	0.82	1.08
Total, gross value of production	194.77	212.09	194.48	233.55	189.56	147.59	123.01	153.15	228.07
Economic (full ownership) costs:									
Variable cash expenses	62.44	69.11	78.32	81.25	78.14	75.32	69.66	70.15	71.26
General farm overhead	12.74	14.59	19.44	14.80	14.67	11.02	10.77	13.31	17.38
Taxes and insurance	11.64	12.50	10.43	11.30	12.93	10.12	10.76	11.30	11.28
Capital replacement	26.46	25.73	25.10	26.65	27.57	26.10	26.39	27.87	28.37
Operating capital	3.93	5.38	4.67	3.79	3.97	3.86	2.56	2.83	3.29
Other nonland capital	5.20	4.68	4.21	4.05	5.10	4.76	4.86	5.08	6.06
Land	40.20	47.79	47.54	59.27	45.96	52.47	43.72	50.65	73.16
Unpaid labor	5.90	6.39	9.24	10.18	9.58	7.18	7.62	8.41	8.38
Total, economic costs	169.64	187.20	198.95	211.29	197.92	190.83	176.34	189.60	219.18
Residual returns to management and risk	25.13	24.89	-4.47	22.26	-8.36	-43.24	-53.33	-36.45	8.89
Harvest-period price (dollars/bu.)	3.68	3.84	3.75	3.75	3.40	3.14	2.41	2.50	3.74
Yield (bu./planted acre)	52.90	55.22	51.18	61.72	55.21	46.69	50.69	60.82	60.70

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

Appendix table 9A--Wheat production cash costs and returns, Southwest, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	266.81	287.45	249.42	253.36	240.90	266.55	207.00	201.79	323.64
Wheat straw	9.78	3.94	4.16	4.75	4.53	0.91	0.73	0.66	0.80
Total, gross value of production	276.59	291.39	253.58	258.11	245.43	267.46	207.73	202.45	324.44
Cash expenses:									
Seed	14.29	14.52	13.74	13.89	12.31	17.40	16.58	17.21	16.12
Fertilizer, lime, and gypsum	23.53	45.59	45.28	41.00	43.52	21.40	19.93	18.30	20.02
Chemicals	7.66	9.16	9.79	10.15	10.37	10.24	10.22	9.96	10.12
Custom operations 1/	9.28	35.75	32.44	32.39	32.96	22.8	22.65	22.86	24.99
Fuel, lube, and electricity	23.38	35.52	41.13	40.77	38.63	29.01	25.77	27.16	28.20
Repairs	11.11	13.05	12.66	13.50	14.56	9.66	9.33	9.53	10.04
Hired labor	9.29	7.22	7.47	7.45	7.82	8.11	8.40	8.70	8.98
Other variable cash expenses 2/	9.71	11.01	15.61	15.67	15.94	7.52	7.27	7.29	7.29
Total, variable cash expenses	108.25	171.82	178.12	174.82	176.11	126.14	120.15	121.01	125.76
General farm overhead	16.64	18.53	26.63	28.16	28.77	19.81	18.46	17.43	24.36
Taxes and insurance	19.00	16.71	14.00	15.01	15.46	17.22	17.49	17.74	17.88
Interest	40.74	43.47	42.27	62.27	58.08	46.26	35.63	22.06	28.52
Total, fixed cash expenses	76.38	78.71	82.90	105.44	102.31	83.29	71.58	57.23	70.76
Total, cash expenses	184.63	250.53	261.02	280.26	278.42	209.43	191.73	178.24	196.52
Gross value of production less cash expenses	91.96	40.86	-7.44	-22.15	-32.99	58.03	16.00	24.21	127.92
Harvest-period price (dollars/bu.)	3.86	3.97	3.67	3.87	3.47	3.38	2.85	2.76	4.06
Yield (bu./planted acre)	69.03	72.43	67.95	65.47	69.50	78.74	72.72	72.99	79.77

Appendix table 9B--Wheat production economic costs and returns, Southwest, 1980-88

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dollars per planted acre									
Gross value of production (excluding direct Government payments):									
Wheat	266.81	287.45	249.42	253.36	240.90	266.55	207.00	201.79	323.64
Wheat straw	9.78	3.94	4.16	4.75	4.53	0.91	0.73	0.66	0.80
Total, gross value of production	276.59	291.39	253.58	258.11	245.43	267.46	207.73	202.45	324.44
Economic (full ownership) costs:									
Variable cash expenses	108.25	171.82	178.12	174.82	176.11	126.14	120.15	121.01	125.76
General farm overhead	16.64	18.53	26.63	28.16	28.77	19.81	18.46	17.43	24.36
Taxes and insurance	19.00	16.71	14.00	15.01	15.46	17.22	17.49	17.74	17.88
Capital replacement	27.24	27.10	29.82	31.42	31.75	24.57	24.24	24.50	25.79
Operating capital	5.59	9.90	8.16	6.34	7.16	3.05	3.05	3.45	4.04
Other nonland capital	5.49	4.64	5.05	4.82	5.97	4.98	4.97	4.92	6.04
Land	60.86	60.19	67.16	67.46	67.12	108.97	90.03	92.49	107.82
Unpaid labor	20.69	16.05	16.60	16.55	17.38	18.05	18.70	19.38	19.98
Total, economic costs	263.71	324.94	345.54	344.58	349.72	324.22	297.09	300.92	331.67
Residual returns to management and risk	12.88	-33.55	-91.96	-86.47	-104.29	-56.76	-89.36	-98.47	-7.23
Harvest-period price (dollars/bu.)	3.86	3.97	3.67	3.87	3.47	3.38	2.85	2.76	4.06
Yield (bu./planted acre)	69.03	72.43	67.95	65.47	69.50	78.74	72.72	72.99	79.77

1/ Includes cost of technical services. 2/ Includes cost of purchased irrigation water.

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